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LAKE TAHOE AND THE SNOWY CREST OF THE SIERRA. See Page. 197

THE

CALIFORNIA SCRAP-BOOK:

A REPOSITORY OF

Useful Information and Select Reading.

COMPRISING

CHOICE SELECTIONS OF PROSE AND POETRY, TALES AND ANECDOTES, HISTORICAL, DESCRIPTIVE, HUMOROUS, AND SENTIMENTAL PIECES, MAINLY CULLED FROM THE VARIOUS NEWSPAPERS AND PERIODICALS OF THE PACIFIC COAST.

COMPILED BY

OSCAR T. SHUCK.

ILLUSTRATED.

"Happy is he who has laid up in youth, and held steadfast in fortune, a genuine and passionate love of reading; the true balm of hurt minds, of surer and more healthful charm than poppy or mandragora, or all the drowsy syrups of the world; by that single taste, by that single capacity, he may bound in a moment into the still regions of delightful study, and be at rest. * * * Well may he prize that endeared charm, so effectual and safe, without which this brain (placing his hand on his forehead) had long ago been chilled by paralysis, or set on fire by insanity."

RUFUS CHOATE.

SAN FRANCISCO:

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THIS VOLUME IS INSCRIBED,

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BY

THE COMPILER.

PREFACE.

THE following work is the result of the compiler's gleanings for his own Scrap-Book for a number of years past. It contains over two hundred articles, upon a multitude of subjects, the greater part of which emanated from the pens of California writers. It is, for this reason, called the CALIFORNIA SCRAP-BOOK.

In the selection of these articles, the compiler has exercised great care, giving the date and authority in all cases when known; and in preparing the work for the public, he has at every step been influenced by one motive—a determination to make the volume a valuable work of reference to professional and literary men, and an acceptable companion in the family circle, not only in California, but wherever it may find its way.

The compiler desires to express his thanks to Messrs. HENRY E. HIGHTON and JAMES G. CARSON, of San Francisco, for valuable assistance rendered him in the preparation of this volume.

O. T. S.

SAN FRANCISCO, *November*, 1868.

SEAL OF THE STATE
EUREKA
OF CALIFORNIA.

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Mining and Scientific Press.
Overland Monthly.
The Golden City.
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State Capital Reporter, Sacramento.

Mountain Democrat, Placerville.
Sierra Citizen, Downieville.
Santa Cruz Sentinel.
Stockton Independent.
Placerville Index.
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Santa Barbara Gazette.
San Rafael Journal.
Yreka Union.
Colusa Sun.
Sonora Democrat.

Territorial Enterprise, Virginia, Nev.
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Old Pah Utah, Washoe City, Nev.

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All the Year Round.
Blackwood's Magazine.
Illustrated London News.
Frazer's Magazine.
Edinburgh Review.

Paris Temps.

THE

CALIFORNIA SCRAP-BOOK.

ORATION BY COL. E. D. BAKER, DELIVERED IN SAN FRANCISCO, ON 27TH SEPTEMBER, 1858, ON OCCASION OF THE PUBLIC CELEBRATION OF LAYING THE ATLANTIC TELEGRAPH.

ELLOW-CITIZENS:—Amid the general joy that thrills throughout the civilized world, we are here to bear our part. The great enterprise of the age has been successfully accomplished. Thought has bridged the Atlantic, and cleaves its unfettered path across the sea—winged by the lightning and guarded by the billow. Though remote from the shores that first witnessed the deed, we feel the impulse and swell the pæan; as in the frame of man, the nervous sensibility is greatest at the extremity of the body so we, distant dwellers on the Pacific coast, feel yet more keenly than the communities which form the centers of civilization, the greatness of the present success, and the splendor of the advancing future.

The transmission of intelligence by electric forces is perhaps the most striking of all the manifestations of human power, in compelling the elements to the service of man. The history of the discovery is a monument to the sagacity, the practical observation, the inductive power of the men whose names have become famous and immortal. The application to the uses of mankind is scarcely less wonderful, and the late extension across a vast ocean, ranks its projectors, and accomplishers with the benefactors of their race. We repeat here to-day the names of Franklin, and

Morse, and Field. We echo the sentiments of generous pride, most felt in the Commonwealth of Massachusetts, at the associated glory of her sons. But we know, that this renown will spread wherever their deeds convey blessings to the human race, that like their own works it will extend beyond ocean and deserts, and like these works, will remain to late and successive generations.

The history of the Atlantic Telegraph is fortunately familiar to most of this auditory. For more than a hundred years it has been known that the velocity of electricity was nearly instantaneous. It was found that the electricty of the clouds, and that produced by electric excitation, was identical; next followed the means for its creation, and the mechanism of transmission. Its concentration was found in the corrosion of metals in acids, and the use of the voltaic pile; its transmission was completed by Morse in 1843, and it was reserved to *Field* to guide it across the Atlantic. Here, as in all other scientific results, you find the wonder-working power of observation and induction; and nowhere in the history of man is the power of Art—*action*, directed by Science—*knowledge* systematized—so signally and beautifully obvious. I leave to the gifted friend who will follow me, in his peculiar department, the appropriate description of the wonders of the deep seaway; of the silent shores beneath; of sunless caverns and submarine plains. It is for others to describe the solitudes of the nether deep. Yet who is there whose imagination does not kindle at the idea that every thought which springs along the wires vibrates in those palaces of the ocean where the billows cease to roll and light fails to penetrate?

"From the dark, unfathomed caves of ocean" the pearl that heaves upon the breast of beauty is dragged to the glare of day. There, the unburied dead lie waiting for the resurrection morning, while above them the winds wail their perpetual requiem; there the lost treasures of India and Peru are forever buried; there, the wrecks of the Armada and Trafalgar are forever whelmed.

> What flags and what trophies are floating free,
> In the shadowy depths of the silent sea!

But amid these scattered relics of the buried Past, over shell-formed shores and wave-worn crags, the gleaming Thought darts it way. Amid the monsters of the deep, amid the sporting myriads and countless armies of the sea, the single link that unites two worlds, conveys the mandate of a king or the message of a lover. Of old, the Greek loved to believe that Neptune ruled the ocean, and stretched his trident over the remotest surge. The fiction has become reality; but man has become the monarch of the wave, and his trident is a single wire!

Fellow-citizens: The scene in which we each bear a part to-day is one peculiar, it is true, to the event which we celebrate; but it is also very remarkable in many and varied aspects.

Never before has there been on the Pacific coast such an expression of popular delight. We celebrate the birthday of a nation with signal rejoicing; but vast numbers who are here to-day can find no place in its processions, and perhaps wonder at its enthusiasm; we celebrate great victories, which give new names to our history and new stars to our banner—these are but national triumphs; but to-day, the joy is universal; the procession represents the world—all creeds, all races, all languages are here; every vocation of civilized life mingles in the shout and welcomes the deed. The minister of religion sees the Bow of Promise reflected under the sea, which speaks of universal peace; the statesman perceives another lengthening avenue for the march of free principles; the magistrate can see here new guards to the rights of society and property, and a wide field for the spread of international law; the poet kindles at the dream of a great republic of letters tending toward a universal language—and the star of science finds a pledge that individual enterprise may yet embody his discoveries in beneficent and world-wide action.

The mechanic walks with a freer step and a more conscious part, for it is his skill which has overcome the raging sea and the stormy shore; and labor, toil-stained and sun-browned labor, claims the triumph as his own in a twofold right. First, because without patient enduring

toil, there could be neither discovery, invention, application, or extension; and again, because whatever spreads the blessings of peace and knowledge, comes home to his hearth and his heart.

Surrounded, then, as I am by the representatives of all civilized nations, let me express in a few brief words some of the thoughts that are struggling for utterance upon your lips as you contemplate the great event of the century. Our first conviction is that the resources of the human mind and the energies of the human will are boundless and illimitable; from the time when the new philosophy, of which Francis Bacon was the great exponent, became firmly written in a few minds, the course of human progress has been unfettered—each established fact, each new discovery, each complete induction is a new weapon from the armory of truth; the march can not retrograde; the human mind will never go back; the question as to the return of barbarism is forever at rest. If England were to sink beneath the ocean, she hath planted the germ of her thought in many a fair land beside, and the tree will shadow the whole earth. If the whole population of America were to die in a day, a new migration would repeople it; not with living forms alone, but with living thought, bright streams from the fountains of all nations.

Oh! Science, thou thought-clad leader of the company of pure and great souls, that toil for their race and love their kinds, measurer of the depths of earth and the recesses of heaven! Apostle of civilization—handmaid of religion—teacher of human equality and human right—perpetual witness for the Divine wisdom—be ever as now, the great minister of peace—let thy starry brow and benign front still gleam in the van of progress, brighter than the sword of the conqueror, and welcome as the light of heaven!

The commercial benefits to accrue to all nations from instantaneous communication are too apparent to permit much remark; the convenience of the merchant, the correspondence of demand and supply, the quick return of values, the more immediate apprehension of the condition of the world, are among the direct results most obvious to all men; but

these are at last mere agencies for a superior good, and are but the heralds of the great ameliorations to follow in the stately march.

The great enemy of commerce, and indeed of the human race, is war. Sometimes ennobling to individuals and nations, it is more frequently the offspring of a narrow nationality and inveterate prejudice. If it enlists in its service some of the noblest qualities of the human heart, it too often perverts them to the service of a despot. From the earliest ages, a chain of mountains, or a line of a river, made men strangers, if not enemies. Whatever, therefore, opens communication and creates interchange of ideas, counteracts the sanguinary tendencies of mankind, and does its part to "beat the sword into the plowshare." We hail, therefore, as we trust, in the event we commemorate, a happier era in the history of the world, and read in the omens attendant on its completion an augury of perpetual peace.

The spectacle which marked the moment when the cable was first dropped in the deep sea was one of absorbing interest. Two stately ships of different and once hostile nations, bore the precious freight. Meeting in mid-ocean they exchanged the courtesies of their gallant profession—each bore the flag of St. George, each carried the flowing stripes and blazing stars—on each deck that martial band bowed reverently in prayer to the Great Ruler of the tempest: exact in order, perfect in discipline, they waited the auspicious moment to seek the distant shore. Well were those noble vessels named—the one *Niagara*, with a force resistless as our own cataract; the other *Agamemnon*, "the king of men," as constant in purpose, as resolute in trial, as the great leader of the Trojan war. Right well, oh! gallant crew, have you fulfilled your trust! Favoring were the gales and smooth the seas that bore you to the land; and oh! if the wish and prayer of the good and wise of all the earth may avail, your high and peaceful mission shall remain forever perfect, and those triumphant standards so long shadowing the earth with their glory, shall wave in united folds as long as the Homeric story shall be remem-

bered among men—or the thunders of Niagara reverberate above its arch of spray.

It is impossible, fellow-citizens, within such limits as the nature of this assemblage indicates, to portray the various modes in which the whole human race are to be impelled on the march of progress by the telegraphic union of the two nations; but I can not forget where I stand, nor the audience I address. The Atlantic Telegraph is but one link in a line of thought which is to bind the world; the next link is to unite the Atlantic and Pacific. Who doubts that this union is near at hand? Have we no other *Fields?* Shall the skill which sounded the Atlantic, not scale the Sierra Nevada? Is the rolling plain more dangerous than the rolling deep? Shall science repose upon its laurels, or achievement faint by the Atlantic shore? Let us do our part; let our energy, long dormant, awake! Let us be again the men we were when we planted an empire. We are in the highway of commerce; let us widen the track—one effort more, and science will span the world. While I speak, there comes to us, borne on every blast, from the east and from the west, high tidings of civilization, toleration and freedom. In England the Jews are restored to all the privileges of citizens, and the last step in the path of religious toleration is taken. The Emperor of Russia has decreed the emancipation of his serfs, and the first movement for civil liberty is begun. China opens her ports, and commerce and Christianity will penetrate the East. Japan sends her embassador to America, and America will return the blessings of civilization to Japan. Oh! human heart and human hope! never before in all your history did ye so throb with promise for the race; never before did ye so rise to the inspiration of a prophet in the majesty of your prediction.

Fellow-citizens: We have a just and generous pride in the great achievement we are here to commemorate. We rejoice in the manly energy, the indomitable will, that pushed it forward to success. We admire the skillful adaptation and application of the forces of nature to the uses of mankind; we reverence the great thinkers whose

observation swept through the universe for facts and events, and whose patient wisdom traced and evolved the general law. Yet, more than this, we turn, with wonder and delight, to behold, on every hand, the results of scientific method everywhere visible and everywhere increasing; but, amid that wonder and delight, we turn to a still greater wonder—*the human mind itself!* Who shall now stay its progress? What shall impede its career? No longer trammeled by theories or oppressed by the despotism of authority—grasping, at the very vestibule, the key to knowledge, its advance, though gradual, is but the more sure. It is engaged in a perpetual warfare, but its empire is perpetually enlarging. No fact is forgotten, no truth is lost, no induction falls to the ground; it is as industrious as the sun—it is as restless as the sea—it is as universal as the race itself. It is boundless in its ambition and irrepressible in its hope! And yet, in the very midst of the great works that mark its progress, while we behold on every hand the barriers of darkness and ignorance overthrown, and perceive the circle of knowledge continually widening, we must forever remember that man, in all his pride of scientific research, and all his power, of elemental conquest, can but follow, at an infinite distance, the methods of the Great Designer of the Universe. His research is but the attempt to learn what nature has done or may do; his plans are but an imperfect copy of a half-seen original. He strives, and sometimes with success, to penetrate into the workshop of nature; but, whether he use the sunbeam, or steam, or electricity—whether he discover a continent or a star—whether he decompose light or water—whether he fathom the depths of the ocean or the depths of the human heart—in each and all he is but an imitator of the Great Architect and Creator of all things. We have accomplished a great work; we have diminished space to a point; we have traversed one-twelfth of the circumference of our globe with a chain of thought pulsating with intelligence and almost spiritualizing matter. But, even while we assemble to mark the deed and rejoice at its completion, the Almighty, as if to impress us with a becoming sense of our weakness,

when compared with his power, has set a new signal of his reign in heaven. If, to-night, fellow-citizens, you will look out from the glare of your illuminated city into the north-western heavens, you will perceive, low down on the edge of the horizon, a bright stranger, pursuing its path across the sky. Amid the starry hosts that keep their watch, it shines, attended by a brighter pomp and followed by a broader train. No living man has gazed upon its splendors before, no watchful votary of science has traced its course for nearly ten generations. It is more than three hundred years since its approach was visible from our planet. When last it came it startled an emperor on his throne, and while the superstition of his age taught him to perceive in its presence a herald and a doom, his pride saw in its flaming course and fiery train, the announcement that his own light was about to be extinguished. In common with the lowest of his subjects, he read omens of destruction in the baleful heavens, and prepared himself for a fate which alike awaits the mightiest and the meanest. Thanks to the present condition of scientific knowledge, we read the heavens with a far clearer perception. We see, in the predicted return of the rushing, blazing comet through the sky, the march of a heavenly messenger along its appointed way and around his predestined orbit. For three hundred years he has traveled amid the regions of infinite space. "Lone wandering, but not lost," he has left behind him shining suns, blazing stars, and gleaming constellations, now nearer to the Eternal Throne, and again on the confines of the universe. He returns, with visage radiant and benign; he returns, with unimpeded march and unobstructed way; he returns, the majestic, swift electric telegraph of the Almighty, bearing upon his flaming front the tidings that, throughout the universe, there is still peace and order—that, amid the immeasurable dominions of the Great King, his rule is still perfect—that suns and stars and systems tread their endless circle and obey the Eternal law.

When Pericles, the greatest of Athenian statesmen, stood in the suburb of the Kerameikus, to deliver the funeral oration of the soldiers who had fallen in the expedition to

Samos, he seized the occasion to describe, with great but pardonable pride, the grandeur of Athens. It was the first year of the Peloponnesian war, and he spoke amid the trophies of the Persian conquest and the creations of the Greek genius. In that immortal oration he depicted, in glowing colors, the true sources of national greatness, and enumerated the titles by which Athens claimed to be the first city of the world. He spoke of constitutional guarantees, of democratic principles, of the supremacy of law, of the freedom of the social march. He spoke of the elegance of private life—of the bounteousness of comforts and luxuries—of a system of education—of their encouragement to strangers—of their cultivated taste—of their love of the beautiful—of their rapid interchange of ideas; but, above all, he dwelt upon the courage of her citizens, animated by reflections that her greatness was achieved "by men of daring, full of a sense of honorable shame in all their actions."

Fellow-citizens: In most of these respects we may adopt the description; but if in taste, in manners, if in temples and statues, if in love and appreciation of art, we fall below the genius of Athens, in how many respects is it our fortune to be superior? We have a revealed religion, we have a perfect system of morality; we have a literature based, it is true, on their models, but extending into realms of which they never dreamed. We have a vast and fertile territory within our own dominion, and science brings the whole world within our reach. We have founded an empire in a wilderness, and poured fabulous treasures into the lap of commerce.

But amid all these wonders, it is obvious that we stand upon the threshold of new discoveries, and at the entrance to a more imperial dominion. The history of the last three hundred years has been a history of successive advances, each more wonderful than the last. There is no reason to believe that the procession will be stayed, or the music of its march be hushed; on the contrary, the world is radiant with hope, and all the signs in earth and heaven are full of promise to the race. Happy are we to whom it is given to share and spread these blessings; happier yet if we shall

transmit the great trust committed to our care undimmed and unbroken to succeeding generations.

I have spoken of three hundred years past—dare I imagine three hundred years to come? It is a period very far beyond the life of the individual man: it is but a span in the history of a nation, throughout the changing generations of mortal life. The men grow old and die, the community remains, the nation survives. As we transmit our institutions, so we shall transmit our blood and our names to future ages and populations. What multitudes shall throng these shores, what cities shall gem the borders of the sea! Here all people and all tongues shall meet. Here shall be a more perfect civilization, a more thorough intellectual development, a firmer faith, a more reverent worship.

Perhaps, as we look back to the struggles of an earlier age, and mark the steps of our ancestors in the career we have traced, so some thoughtful man of letters in ages yet to come, may bring to light the history of this shore or of this day. I am sure, fellow-citizens, that whoever shall hereafter read it, will perceive that our pride and joy is dimmed by no stain of selfishness. Our pride is for humanity: our joy is for the world: and amid all the wonders of past achievement and all the splendors of present success, we turn with swelling hearts to gaze into the boundless future, with the earnest conviction that it will yet develop a universal brotherhood of man.

JUNIPERO SERRA, THE FOUNDER OF CALIFORNIA.

JUNIPERO SERRA, the founder of the Missions, which were the first settlements of civilized man in California, was born on the Island of Majorca, part of the kingdom of Spain, on the 24th of November, 1713. At the age of sixteen, he became a Monk of the order of St. Francis, and the new name of Junipero was then substituted for his baptismal name of Miguel José. After entering the convent, he

went through a collegiate course of study, and before he had received the degree of Doctor, was appointed lecturer upon philosophy. He became a noted preacher, and was frequently invited to visit the larger towns of his native island in that capacity.

Junipero was thirty-six years of age when he determined to become a missionary in the New World. In 1749 he crossed the ocean in company with a number of brother Franciscan Monks, among them several who afterward came with him to California. He remained but a short time in the City of Mexico, and was soon sent a missionary to the Indians in the Sierra Madre, in the district now known as the State of San Luis Potosi. He spent nine years there, and then returned to the City of Mexico where he stayed for seven years, in the Convent of San Fernando.

In 1767, when he was fifty-four years of age, he was appointed to the charge of the Missions to be established in Upper California. He arrived at San Diego in 1769, and, with the exception of one journey to Mexico, he spent all the remainder of his life here. He died at the Mission of Carmel, near Monterey, on the 28th of August, 1784, aged seventy-one years.

Our knowledge of his character is derived almost exclusively from his biography by Palou, who was also a native of Majorca, a brother Franciscan Monk, had been his disciple, came across the Atlantic with him, was his associate in the college of San Fernando, his companion in the expedition to California, his successor in the Presidency of the Missions of Old California, his subordinate afterward in New California, his attendant at his death-bed, and his nearest friend for forty years or more. Under the circumstances, Palou had a right to record the life of his preceptor and superior.

Junipero Serra, as we ascertain his character directly and inferentially in his biography, was a man to whom his religion was every thing. All his actions were governed by the ever-present and predominant idea that life is a brief probation, trembling between eternal perdition on the one side, and salvation on the other. Earth, for its own sake, had

no joys for him. His soul did not recognize this life as its home. He turned with dislike from nearly all those sources of pleasure in which the polished society of our age delights. As a Monk he had, in boyhood, renounced the joys of love, and the attractions of woman's society. The conversation of his own sex was not a source of amusement. He was habitually serious. Laughter was inconsistent with the terrible responsibilities of this probationary existence. Not a joke or a jovial action is recorded of him. He delighted in no joyous books. Art or poetry never served to sharpen his wits, lighten his spirit, or solace his weary moments. The sweet devotional poems of Fray Luis de Leon, and the delicate humor of Cervantes, notwithstanding the perfect piety of both, were equally strange to him. He knew nothing of the science and philosophy which threw all enlightened nations into fermentation a hundred years ago. The rights of man and the birth of chemistry did not withdraw his fixed gaze from the other world, which formed the constant subject of his contemplation.

It was not sufficient for him to abstain from positive pleasure; he considered it his duty to inflict upon himself bitter pain. He ate little, avoided meat and wine, preferred fruit and fish, never complained of the quality of his food, nor sought to have it more savory. He often lashed himself with ropes, sometimes of wire; he was in the habit of beating himself in the breast with stones, and at times he put a burning torch to his breast. These things he did while preaching or at the close of his sermons, his purpose being, as his biographer says, "not only to punish himself but also to move his auditory to penitence for their own sins."

We translate the following incident, which occurred during a sermon which he delivered in Mexico, the precise date and place are not given :—

"Imitating his devout San Francisco Solano, he drew out a chain, and letting his habit fall below his shoulders, after having exhorted his auditory to penance, he began to beat himself so cruelly that all the spectators were moved to tears, and one man rising up from among them, went with all haste to the pulpit and took the chain from the penitent

father, came down with it to the platform of the *presbiterio*, and following the example of the venerable preacher, he bared himself to the waist and began to do public penance, saying, with tears and sobs, 'I am the sinner, ungrateful to God, who ought to do penance for my many sins, and not the father who is a saint.' So cruel and pitiless were the blows, that, in the sight of all the people, he fell down, they supposing him to be dead. The last unction and sacrament were administered to him there, and soon after that he died. We may believe with pious faith, that his soul is enjoying the presence of God."

Serra, and his biographer, did not receive the Protestant doctrine, that there have been no miracles since the Apostolic age. They imagined that the power possessed by the chief disciples of Jesus had been inherited by the Catholic priests of their time, and they saw wonders where their contemporary clergymen, like Conyers, Middleton, and Priestly, saw nothing save natural mistakes. Palou records the following story, with unquestioning faith:—

"When he [Serra] was traveling with a party of missionaries through the province of Huasteca [in Mexico], many of the villagers did not go to hear the word of God at the first village where they stopped; but scarcely had the fathers left the place when it was visited by an epidemic, which carried away sixty villagers, all of whom, as the curate of the place wrote to the reverend father Junipero, were persons who had not gone to hear the missionaries. The rumor of the epidemic having gone abroad, the people in other villages were dissatisfied with their curates for admitting the missionaries; but when they heard that only those died who did not listen to the sermons, they became very punctual, not only the villagers, but the country people dwelling upon ranchos many leagues distant.

"Their apostolic labors having been finished, they were upon their way back, and at the end of a few days' journey, when the sun was about to set, they knew not where to spend the night, and considered it certain that they must sleep upon the open plain. They were thinking about this when they saw near the road a house, whither they went

and solicited lodging. They found a venerable man, with his wife and child, who received them with much kindness and attention, and gave them supper. In the morning the Fathers thanked their hosts, and taking leave, pursued their way. After having gone a little distance they met some muleteers, who asked them where they had passed the night. When the place was described, the muleteers declared that there was no house or ranche near the road, or within many leagues. The missionaries attributed to Divine Providence the favor of that hospitality, and believed without doubt that these hosts were Jesus, Mary, and Joseph, reflecting not only about the order and cleanness of the house (though poor), and the affectionate kindness with which they had been received, but also about the extraordinary internal consolation which their hearts had felt there."

Serra's religious conviction found in him a congenial mental constitution. He was even-tempered, temperate, obedient, zealous, kindly in speech, humble and quiet. His cowl covered neither greed, guile, hypocrisy, nor pride. He had no quarrels and made no enemies. He sought to be a monk, and he was one in sincerity. Probably few have approached nearer to the ideal perfection of a monkish life than he. Even those who think that he made great mistakes of judgment in regard to the nature of existence and the duties of man to society, must admire his earnest, honest, and good character.—*Alta California, Oct.* 31, 1862.

A SONG BY EDWARD POLLOCK.

EDITORS EVENING MIRROR:—In looking through some old MSS., in my office, to-day, I accidentally stumbled on the following sweet little poem, by the late EDWARD POLLOCK. It was handed to me in the street, in 1856, and carelessly laid aside for future examination. In the hurry of events during the summer of that year, it was overlooked and forgotten. It now reappears, consecrated by the seal of death, and embalmed in its own beauty.

W. H. RHODES.

A SONG.

Ye stars that look on me to-night,
How beautiful ye seem!
For I have found my spirit's light,
The angel of my dream.
Oh, never half so clear before
Have I beheld you shine;
For heaven itself looks lovelier
To lover's eyes like mine!

Alas! I fear when silence waits
To catch my voice in vain,
The listener at your golden gates
Will hear some other twain,
Whose hearts, like ours, in melody
Will sadly heave and sigh,
To see how calmly you behold
Humanity pass by!

S. F. Mirror, September 29, 1860.

WHY IT RAINS.

WHY does it rain? So simple a question ought to be readily answered. We shall be sent to our school-books, may be, for presuming to ask it. But we shall not find, at least in the books of our school-days, an answer to the interrogative, childish as it may be. We are in a widely different country and climate from that in which the majority of our adult population studied the laws of the moist and dry weather, and there is a totally different application of their principles here from that of our old homes. Besides, we would not wonder if philosophy, always vague and uncertain at best on this subject, had changed somewhat since the present generation were boys and girls, and new theories had supplanted old. It is of some moment to know precisely why it rains. If the coming of the rain be of any con-

cern to the farmer and the miner, a simple knowledge of its causes—whence it comes, and in obedience to what known laws—may serve as the basis of information of immediate and practical value. It may lead to a better acquaintance with the laws of our climate, and possibly to improvement in the science of agriculture; and since it has grown to be an admitted fact among intelligent minds that very many of the failures in the latter science in this country are attributable to an imperfect knowledge of the proper seasons for setting out in the labors of the husbandman, an answer to our simple question may lead to the cure of many radical defects.

We know the rains have their allotted periods, that the comparative fall is so much per season, that the approach of rain is marked by sensible changes in the atmosphere, and it is very easy to note the direction from which the rain cometh, perhaps discern the face of the sky for the morrow. But here our weather wisdom stoppeth short. A week or two ago the temperature fell several degrees; we had a cold spell, the sure premonition of rains, at this season of the year, notwithstanding the subsequent warmth. On Thursday last the first floods descended. The fetters of our winter, that is to say, the long dry season of parched and suspended vegetable life, corresponding to the period of its extinction under frosts and snows in our old homes, were broken, and spring commenced. In a few weeks we shall have grass green in our valleys and about our door yards. Before Christmas there will be peeping buds and blossoms in the favorite haunts of Flora in our lowlands.

The prevailing winds which blow along our coast are from the westward. The discovery was valuable when first applied to man's use, over two hundred years ago. Then the commerce of this coast was limited to "one single galeon, performing, annually, one voyage from Manilla and Acapulco, and back again." It was found that by steering north, the mariner would fall in with westerly winds, by which he would be wafted in sight of the California coast. In this way the voyage was sometimes made in fifty days, which is not far from the average duration of voyages in these days

But the westerly breezes are not the only periodical winds which visit our shores. The summer climate of San Francisco, as well as all along our sea-coast, is marked by cool winds from a northerly direction. Their invigorating freshness is derived from their passage across a vast body of cool water making down toward our shores from the Arctic Sea; very much in the manner of the Gulf Stream, though with a different temperature, along the coasts of England. Our westerly breezes are always charged with moisture, and distil the dews by which vegetation is nourished in our cool, summer nights. The lower temperature of the sea-coast precipitates this moisture more freely, causing it to roll inland in heavy banks of fogs, and sometimes to appear, in summer time, in showers of rain. Now, if we study the operation upon these prevailing winds, of the changes made in our seasons by the passage of the sun to the south, we may obtain a clue to the source of our winter supplies of rain. And in pursuit of our inquiry we shall probably find no author better capable of instructing us than Lieut. Maury, from whose last work we have within the last month or two drawn copiously for other facts in physical geography. But first, let us state the theory of the "trades" and northwest and southwest winds, as advanced by Maury, condensing our description from his own language.

"From the parallel of about 30 degrees north and south," says this writer, "nearly to the equator, we have, extending entirely around the earth, two zones of perpetual winds, viz.: the zone of northeast trades on this side, and of southeast on that. With slight interruptions, they blow perpetually, and are steady and constant, except when they are turned aside by a desert here and there, to blow as monsoons, or as land and seabreezes. As these two main currents of air are constantly flowing from the poles toward the equator, it is assumed that the air kept in motion must return by some channel to the place toward the poles whence it comes, in order to supply the trades. The return currents are assigned to the upper regions of the atmosphere until they pass over those parallels between which the trade winds are always blowing on the surface. The rotation of the earth on

its axis causes these direct and counter-currents to lag behind, as they flow to or from the equator, and hence *appear* to move transversely across the globe, turning to the west as they go from the poles to the equator, and in the opposite direction as they move from the equator to the poles. The air from the direction of the poles presses toward the equator, traveling high above the surface of the earth, gradually drawing nearer (perhaps owing to the convexity of the earth), until about the parallel of 30 degrees, when the two currents, northern and southern, meet, and, pressing heavily against each other, produce the calms north and south of the equator, designated as the calms of Cancer and Capricorn. The pressure gives a downward tendency to the atmosphere, and from under each of these banks of calms slips away, in the direction both of the equator and the poles, separate currents, denominated respectively N. E. and S. E. trades (toward the equator), and S. W. and N. W. passage winds, blowing toward the poles. At the equator a second meeting takes place between the currents which have started together from the poles; this time on the surface of the earth. Here, therefore, is another opposition of winds, and another calm belt. Warmed by the heat of the sun, however, and pressed on both sides by the whole force of the N. E. and S. E. trades, the column of air rises, and the same exchange takes place in the upper regions which we have seen occur at the surface in the two calm belts, the two currents continuing their course respectively north and south as before. At the poles, approaching more and more obliquely, from the spiral motion communicated by the earth, the particles of air rush together and are wheeled about each axis in a continued circular gale, by which each again ascends to upper regions and leaves beneath still another calm place at either pole." Such, briefly, is the theory of the motion of the earth's atmosphere, as given by our author. Now, as to the formation of clouds and the distributing process which is going on under the action of the winds:—

"When the northeast and southeast trades meet and produce the equatorial calms, the air, by the time it reaches the

calm belt, is heavily laden with moisture, for in each hemisphere it has traveled obliquely over a large space of ocean. It has no room for escape but in the upward direction. It expands as it ascends and becomes cooler; a portion of its vapor is thus condensed, and comes down in the shape of rain. Therefore it is that under these calms we have a region of constant precipitation." But all the moisture which is taken up by the trades is not precipitated here. Borne off by the currents of the upper air, it is distributed in their course along the mountain tops of those great ranges which supply the mighty rivers of America, Europe and Asia. The rivers of our northern hemisphere, the Mississippi for example, derive their supplies from the intertropical regions of the South Sea, carried northward on the wings of the winds from the south pole. Their operation in concert with the rays of the sun is thus described:—

"Late in the autumn of the north, throughout its winter, and in early spring, the sun is pouring his rays with the greatest intensity down upon the seas of the southern hemisphere, and this powerful engine (the atmosphere), is pumping up the waters there for our northern rivers with the greatest activity. At this time the mean temperature of the entire southern hemisphere is said to be about ten degrees higher than the northern. The heat which this heavy evaporation absorbs becomes latent, and, with the moisture, is carried through the upper regions of the atmosphere until it reaches our climates. Here the vapor is formed into clouds, condensed, and precipitated. The heat which held this water in the state of vapor is set free, it becomes sensible heat, and it is that which contributes so much to temper our winter climate. It clouds up in winter, it turns warm, and we say we are going to have falling weather. That is because the process of condensation has already commenced, though no rain or snow may have fallen."

Only about two-thirds of the northeast trade winds can flow over the ocean, on account of the greater body of land presented in the northern hemisphere, while the evaporating surface exposed to the southeast trades is calculated to

be about fifty millions of miles greater than in the north. Thus, two-thirds, only, of the northeast trade winds are fully charged with moisture, and only two-thirds of the amount of rain that falls in the northern hemisphere should fall in the southern. "And this," says Maury, "is just about the proportion that observation gives." Now let us see the application of these principles in bringing us on winter rains.

The calm and trade wind regions, or belts, we are told, move up and down the earth annually, in latitude nearly a thousand miles, following the sun. The whole system of zones, viz.: of trades, calms, and westerly winds, goes with it. In the winter, the calm belt of Cancer approaches the equator, drawing with it the southwest winds. That is to say, the point at which these winds commence to blow is shifted by so many degrees farther south. During the summer, their influence has been felt on the northern coast, in Washington Territory and New Caledonia. They are the southeast trades, which, ascending at the equator by the process we have described, are met by currents from the north in the calm belt of Cancer, and forced under, becoming surface currents in their oblique progress toward this coast. They are the rain-carriers, charged with the warm liquid treasures of the South Sea. During the summer they have been busy in the vast and hilly region north of Puget Sound, though not with the same effect as when afterward brought into contact with our winter climate. In Oregon, however, it rains every month in the year, and five times more in the winter than in the summer months. The presence of these southwest rain winds, if not in actual showers, in heavy rolling fogs over the districts of New Caledonia, gives that country its peculiar climate, and may explain why Fraser River has so long baffled, with its high waters, the hopes of its late treasure-seeking visitors; its source being high up among the hills where the air is cold enough to precipitate the moisture of the sea-breezes in the form of snow or rain. But the sun in his journey southward, as we have noticed, takes with him, so to speak, the trades, calms, and westerly winds, and brings the latter to

bear upon the coast of California, commencing as far down as the Gulf. "In winter and spring," says Maury, "the land in California is cooler than the sea air, and is quite cold enough to extract moisure from it. But in summer and autumn the land is the warmer, and can not condense the vapors of water held by the air; so the same cause which made it rain in Oregon now makes it rain in California. As the sun returns to the north, he brings the calm belt of Cancer and the northeast trades along with him; and now, at places where, six months before, the southwest winds were the prevailing winds, the northeast trades are found to blow. This is the case in the latitude of California. The prevailing winds, then, instead of going from a warmer to a cooler climate, as before, are going the opposite way. Consequently, if, under these circumstances, they have the moisture in them to make rains of, they can not precipitate it."

Continuing the observations, we are taught the secret of the tropical seasons, and the movements of the equatorial calm belt, as follows:—

"Panama is in the region of equatorial calms. This belt of calms travels during the year, back and forth, over about seventeen degrees of latitude, coming farther north in the summer, where it tarries for several months, and then returning so as to reach its extreme southern latitude some time in March, or April. Where these calms are it is always raining, and the chart (*vide* Trade Wind Chart—'Maury's Wind and Current,') shows that they hang over the latitude of Panama from June to November; consequently, from June to November is the rainy season at Panama. The rest of the year place is in the region of the northeast trades, which, before they arrive there, have to cross the mountains of the Isthmus, on the cool tops of which they deposit their moisture, and leave Panama rainless and pleasant until the sun returns north with the belt of equatorial calms after him. They then push the belt of northeast trades farther to the north, occupy a part of the winter zone, and refresh that part of the earth with summer rains. This belt of calms moves over more than double of

its breadth, and nearly the entire motion from south to north is accomplished generally in two months, May and June. Take the parallel of four degrees north as an illustration: During these two months the entire belt of calms crosses this parallel, and then leaves it in the regions of the south-east trades. During these two months it was pouring down rain on that parallel. After the calm belt passes it, the rains cease, and the people in that latitude have no more wet weather till the fall, when the belt of calms recrosses this parallel on its way to the south. By examining the 'Trade Wind Chart,' it may be seen what the latitudes are that have two rainy seasons, and that Bogota is within the bi-rainy latitudes."

The dry season in California is the wet season in the Mississippi Valley. The writer deduces that the springs and rills of the Father of Waters are fed from the same source that supplies our rivers, and refreshes our parched earth, viz.: the great boiler, or evaporating surface of the South Pacific. The winds coming from the southwest, and striking upon the coasts of California and Oregon in winter, precipitate here copiously. They then pass over the mountains, robbed in part of their moisture. "Of course, after watering the Pacific shores, they have not as much vapor to make rains of, especially for the Upper Mississippi Valley, as they had in the summer time, when they dispensed their moisture in the shape of rains most sparingly upon the Pacific coasts."

But there are climates on the Pacific, as well as in other parts of the globe, where rain never falls. The coast of Peru lies within this region. Many of our readers will have noticed, "going the rounds of the newspapers," the solution of the problem, "Why it never rains in Peru," borrowed, without acknowledgment of its authorship. It is a part of the same theory we have been rapidly sketching, and, as it seems fitly joined to the subject under notice, we reproduce it in the author's own words. It is necessary to observe that the coast of Peru is within the region of perpetual southeast trade winds:—

"The southeast trade winds in the Atlantic Ocean first

strike the water on the coast of Africa. Traveling to the northwest, they blow obliquely across the ocean until they reach the coast of Brazil. By this time they are heavily laden with vapor, which they continue to bear along across the continent, depositing it as they go, and supplying with it the sources of the Rio de la Plata, and the southern tributaries of the Amazon. Finally they reach the snow-capped Andes, and here is wrung from them the last particle of moisture that that very low temperature can extract.

"Reaching the summit of that range, they now tumble down, as cool and dry winds, on the Pacific slopes beyond. Meeting with no evaporating surface, and with no temperature *colder* than that to which they were subjected on the mountain-tops, they reach the ocean before they again become charged with fresh vapor, and before, therefore, they have any which the Peruvian climate can extract. The last they had to spare was deposited as snow on the tops of the Cordilleras, to feed mountain streams under the heat of the sun, and irrigate the valleys on the western slopes. Thus we see how the top of the Andes becomes the reservoir from which are supplied the rivers of Chili and Peru."

The other rainless, or almost rainless, regions are the western coasts of Mexico, the deserts of Africa, Asia, North America, and Australia. The dry season of California is the rainy season of Chili.

We might continue these observations with equal pleasure and profit to our readers through the beautiful and ingenious applications which the author makes of his theory in establishing the laws of other climates, but we are reminded that we are not only widely trespassing upon space, but we are proceeding as though the facts we have related rested on mere assumption. Such is not the case, and nothing could be more unfair than a sketch of Maury's theory without reference to the arguments with which he hedges around and sustains his reasoning every step of the way. It is this, indeed, which gives his suggestions their weight and value. It is true, the system of the circulation of the winds and the sources of the rain, which we have so

imperfectly outlined, is, after all, hypothetical, and it displaces in some cases other popular theories; but it is safe to assert that none have ever been so complete or satisfactory. And it is enough to know that Maury's philosophy is becoming gradually adopted among scientific men, and by none, so far as we have heard, have his positions been controverted.

Such, briefly stated above, is the answer of modern science to our simple inquiry, Why does it rain? Content with an explanation at once so simple, consistent and authoritative, we have not pursued the inquiry into the causes of the winds on their circuits, or the wonderful system of exchanges at their places of meeting—the upper currents stooping to kiss the ocean and the land, and passing on their way as surface breezes, uninterrupted to the next belt of calms. The process of two opposite winds passing each other is familiarly illustrated by the currents of air passing in and out of a chamber, through an open window or a chimney-flue. But in justice to our author, we must observe that the laws of this exchange are confessedly not fully comprehended by him, though it is demonstrated most satisfactorily that the passing of the great bodies of air on their way from the poles, twice at the surface of the earth and once (at the equator) in the upper regions, *does* take place. He suggests a difference in the magnetic condition of the winds flowing from the equator and the poles as the reason why the currents do not commingle, but pursue their direction as surface winds on meeting at the northern and southern calm belts. If the whole expanse of the globe, from north to south and *vice versa*, were not passed over by the opposite winds, there would be a marked difference in the conditions of organic life in the northern and southern hemispheres, which would forbid the earth's inhabitants removing from one to the other. The whole of Maury's system of philosophy turns on the one grand idea of *compensations*. Beautifully has he followed out and illustrated the principles of this universal law. Well has he said, "The mind is delighted and imagination charmed by contemplating the physical ar-

rangements of the earth from such points of view as this is which we have before us; from it the sea and the air and the land appear each as a part of that grand machinery upon which the well-being of all the inhabitants of the earth, sea, and air depends; and which, on the beautiful adaptations that we are pointing at, affords new and striking evidence that they all have their origin in ONE omniscient idea, just as the different parts of a watch may be considered to have been constructed and arranged according to *one* human design."—*E. C. Kemble, in Sacramento Union, October*, 1858.

THE POISON-OAK AND ITS ANTIDOTE.

IN the woods and thickets of California, as well as on the dry hill-sides, and, in fact, in every variety of locality, may be found a very venomous shrub—the "poison-oak" or "poison ivy;" the *hiedra* of the Spanish people—the dread of all those who are acquainted with it. This plant is known scientifically as follows: it belongs to the natural order *Anacardiaceal*, and is called *Rhus diversaloba* by Torrey and Gray; *Rhus lobata*, by Hooker; and *Rhus toxicodendron*, by Hooker and Arnott. It is very similar to the poison ivy of the Atlantic States (*R. toxicodendron* Linnæus), both in its appearance and in its poisonous qualities. But it is unnecessary for me to describe it, even popularly; for it is unhappily familiar to all, and I will only remark that, although generally a small shrub, the trunk sometimes attains the diameter of six inches, and the whole plant climbs over some large tree for support. The finest specimens that I have ever seen were in an oak and laurel grove, on the road south of San José.

I do not need to describe the cutaneous disease that is produced by contact with or approach to the poison-oak. And it is hardly necessary to advert to the fact that this poison is the cause of a vast deal of misery and suffering in California, and that there is scarcely ever a time in any little town

or neighborhood when there are not one or more persons suffering from it; and I venture the assertion that there are in this State constantly from five hundred to a thousand persons afflicted with this disease. Farmers and laborers are especially liable to this poisoning, and besides the suffering and annoyance caused by it, the loss of valuable time is no small item to be taken into account. Truly he who makes known a prompt and sure antidote to this poison will be a public benefactor; and this communication is made to the public with the confident expectation that the remedy here described will prove to be such benefaction.

The remedies in use for the effects of the poison-oak are quite various, and some of them will cure the milder cases. Of all the common remedies, the warm solution of the sugar of lead has within my experience been productive of the best results. The water of ammonia, warm vinegar and water, the warm decoction of the leaves of *Rhamnus oleifalius* ("Yerba del Oso," of the Californian-Spanish), or even pure warm water, are sufficient sometimes to produce a cure. All these remedies are, of course, applied externally by way of washes to the parts affected.

But the only remedy that I have found invariably successful as an antidote for this poison, is an indigenous plant growing very abundantly in this vicinity (Monterey), and in other parts of the State. It is a tall, stout perennial,

belongs to the composite family, and looks like a small sunflower. It is from one to three feet high, has bright yellow flowers in heads one to two inches in diameter (and as I have said), like small sunflowers, flowering from June to October. Before flowering, the unexpanded heads or buds secrete a quantity of resinous matter, white and sticky, like balsam, that is finally, after the flower expands, distributed over the petals, &c., of the flowers like varnish. The whole plant—flowers, leaves, and all, is resinous and viscid. When it grows in dry hills, it is stiff and rigid, with narrow, thin leaves; but in damp localities it is more robust and succulent, with wide, fleshy leaves. Its botanical name is *Grindelia hirsutula and G. robusta;* but I have not been able to find more than one species, and all the different forms possess the same remedial virtues.

The mode of using it is as follows: One may bruise the fresh herb and apply it by rubbing over the parts affected; or, boiling it in a covered vessel, make a strong decoction of the fresh or dried herb, with which to wash the poisoned surfaces. Its remedial properties appear to be contained chiefly in the resin or balsam-like juice of the plant, which is particularly abundant on the surface. One application is sometimes sufficient for a cure; but if the disease has been of long duration, several days will elapse before relief is obtained. This plant is a remedy for the poison-oak, used originally by the Indians of this vicinity, and by them its virtues have been communicated to the Spanish-Californian people, who are now commencing to use it.

I became acquainted with it in the following manner: A lady acquaintance of mine was poisoned in early youth by the poison-oak, and there resulted a cutaneous affection similar to "salt-rheum,"—fiery, burning, insupportable—that would not yield to the remedies or the skill of good physicians. She underwent cauterization and blistering; she took mercury and other powerful remedies, iodine, sarsaparilla—all to no purpose. Her hands were covered with deep ulcers, and her wrists and arms with an eruption that tormented her day and night. Nothing relieved her. She married in the mean time, and had a family of fine healthy

children; but she did not get rid of her affliction. At length, she, believing that the disease was not salt-rheum, nor any thing more or less than the effects of poison-oak, was induced to use the remedy that I have described, and a very few applications were sufficient to heal up the ulcers, and cure her entirely. She has never been troubled with any cutaneous eruption since that time, although several years have now elapsed.

Her account of her case induced me to use the plant, which I have done frequently since with the happiest effects. One gentleman of my acquaintance who is very susceptible to the poison-oak, was poisoned on the face, hands, &c., and the disease did not yield to sugar of lead, hartshorn, warm lotions, or any other of the commonly used remedies. But a few applications of the decoction of Grindelia removed it entirely. It is said that when Fremont was here with his soldiers, they camped on the flat below the town, among the poison-oak, and many of his men were badly poisoned. The trouble in many cases did not yield to the prescriptions of the physicians, and it was relieved only by using this remedy. But aside from rumor or hearsay, I am cognizant of six cases in which the effects of poison-oak have yielded to the Grindelia, when other remedies failed. Now it can not be said that the effects of the Grindelia, as stated above, were imaginary, or those cures accidental; for the disease produced by the poison-oak is specific and *sui generis*, a cutaneous disease, palpable and severe, that is produced by a specific vegetable poison, and hence does not at all (as may be said of many other diseases) depend upon the imagination or moral state of the patient, either for its cause or cure.

It may not be amiss to say, in conclusion, that the Grindelia is used also by the people of the country as a remedy for other cutaneous diseases that are characterized by heat and itching—such as nettle-rash, salt-rheum, &c., but I have no means of knowing its effects in these diseases.—*Colbert A. Canfield, M. D., in Santa Cruz Sentinel.*

A LOST WORLD.

THE past quarter of a century, disinterring from the dust of ages the hidden secrets of generations so long gone by, that the very names of many of the nations which once figured so conspicuously in the world's annals have perished with them, has developed many strange facts with regard to ancient America. It would be strange, after all, if, instead of having "no past," "no antiquity," as has been alleged by her detractors, the continent discovered by Columbus should prove to be the older of the two.

Throughout its entire length and breadth traces have been discovered of a race, or rather of a world of people, who performed their part in the great life drama at so early an epoch that nearly every vestige of their existence must have disappeared centuries before the discovery of Columbus. The hardy Northmen who visited the Atlantic coasts as early as the fourth or fifth centuries, found them occupied by hostile races in such numbers as to repel every attempt to penetrate the interior; the Northmen who made the first authenticated discoveries in the western hemisphere, in spite of the fact that Columbus has always received that honor, and who must still have been preceded by others, whose accounts of the strange land they had visited, and the wonders they had seen, in the absence of corroboration, were received as fables by their countrymen. Had there been in those days such things as newspapers, the whole world would have learned of another continent. It would have been interesting in a historical point of view, as it would have developed the existence, and perhaps have preserved the record, of a number of nations of which the last vestiges are now fading from the earth.

Whatever may have been the origin of our aborigines, it is certain that large portions of what is now the United States, and of countries farther south, were inhabited by a numerous people, wearing comfortable clothing, and being

somewhat advanced in the arts. Some of them, as those of Mexico and Central America, have left behind them vast ruins, proving that their cities were not unworthy of being ranked with the proudest of the olden time.

Throughout the Northern country numerous traces of vanished people have been from time to time discovered, but fainter and less absolutely defined than those of the Aztecs—showing conclusively the greater antiquity of the Northerners. The mound builders, indications of whose industry and engineering skill have been found by the archæologist, Squires, scattered over the Middle and Northern States, must have been more numerous in their day than the enlightened people that have supplanted them, yet they have vanished so entirely from the scene of their earthly labors, that, unless we adopt the theory of retrogression, and accept the North American Indians and the Southern Aztecs as the last representatives of the ancients of America, we have not the slightest clue to them.

The most remarkable circumstances in connection with these "people" are, that they left behind them no utensils or other implements, and that, in cases where records have been discovered, they were in an alphabet so unlike any thing ever before known (the tables of Copan and Palenque, for instance) as to defy all research. Traces there are of customs similar to those of the Asiatics—traces of an identity of language, but all too vague and uncertain, as yet, to base a theory upon. It seems as though, at some far gone period of the world's history, Almighty Providence, as a punishment for its sins, had blotted at once from existence an entire world, whose very monuments mock the proud, vain, and glorious spirit which led to their erection. But there will, doubtless, arise persons competent to the task, who, from their knowledge of dialects and hieroglyphic writing, may yet succeed in clearing up this most wonderful and impressive of modern mysteries.

PICTURE OF CALIFORNIA IN SPRING-TIME—"AROUND THE BAY."

N the early part of May, a week after my arrival in California, I was invited by a gentleman in San Francisco to take a seat in his carriage for a "drive around the bay." This means around the Bay of San Francisco, which extends southerly about 50 miles from the Golden Gate, where the tides of the Pacific force their way inland. The bay is, therefore, a large salt water lake about eight miles broad, and six times as long. It is undotted with islands, and lies placid in the embrace of some of the richest lands of California. In making the tour around it, we drive down along the narrow county of San Mateo, whose hills divide the dreamy bay from the billows of the Pacific, then across the county of Santa Clara, and up, on the eastern side, through Alameda County to Oakland, where the ferry-boat returns us to the metropolis of wind and fog, whose climate in summer is exhaustively stated in the phrase, "gust and dust."

Early in May is the true time to make this excursion, for then the country is at the height of its brief bloom. California has often been compared with Palestine and Syria for scenery. The passages in the Psalms and the New Testament which describe the fleeting beauty of the flowers and the grass, are certainly applicable here. "For the sun is no sooner risen with a burning heat, than it withereth the grass, and the flower thereof falleth, and the grace of the fashion of it perisheth." Indeed, there is no grass, properly speaking, native to the landscape. The green of early May on the uncultivated plains and slopes is mostly that of the wild oats. As the summer sun rises, and the rains cease, they ripen into a golden tinge, which, at a distance, is the hue of sand, and their seed drops into the parched and crackling ground for new crops when the rain returns. By the middle of June all the wild fields that are destitute of trees look sandy with this harvest of indigenous and self-sowed grain; and it is only in May that the plains and hill-

sides which the plowshare has not broken are clad in their vesture of embroidered green.

But the beauty is as captivating as it is evanescent. Some travelers have written of the marvelous effect of the air of California on the spirits. Bayard Taylor tells us that, on this very drive, he felt, in breathing the air, like Julius Cæsar, Milo of Cortana, and General Jackson rolled into one. I can not honestly say that the vivifying quality was any greater than I have experienced in the Pinkham woods, or the forests of Mt. Adams, or on the heights of Randolph. Oxygen is oxygen, and will General Jacksonize a man as quickly in Coos County, New Hampshire, as when it blows over the Coast Range of California, fresh from the Pacific. But there was a great exhilaration in the first acquaintance with the scenery of a strange land, especially when made in a luxurious carriage, and with the accompaniment of pleasant companions and a very spirited team.

The first thing that arrested attention after leaving the sandy streets of San Francisco was the flowers. Early in May, in New England, people hunt for flowers. A bunch of violets, or a sprig or two of brilliant color, intermixed with green, is a sufficient trophy of a tramp that chills you, damps your feet, and possibly leaves the seed of consumption. Here they have flowers in May, not shy, but rampant, as if nothing else had the right to be; flowers by the acre, flowers by the square mile, flowers as the visible carpet of an immense mountain wall. You can gather them in clumps, a dozen varieties at one pull. You can fill a bushel basket in five minutes. You can reap them into mounds. And the colors are as charming as the numbers are profuse. Yellow, purple, violet, pink, and pied, are spread around you, now in separate level masses, now two or three combined in a swelling knoll, now intermixed in gorgeous confusion. Imagine yourself looking across a hundred acres of wild meadow, stretching to the base of hills nearly two thousand feet high—the whole expanse swarming with little straw-colored wild sunflowers, orange poppies, squadrons of purple beauties, battalions of pink—and then the mountain, unbroken by a tree or a rock, glowing with the investi-

ture of all these hues, softened and kneaded by distance. This is what I saw on the road to San Mateo. The orange and purple seemed to predominate in the mountain robe. But on the lower slopes, and reaching midway its height, was a strange sprinkling of blue, gathered here and there into intenser stripes, and running now and then into sharp points, as if over the general basis of purple, orange, and yellow, there had fallen a violet snow, which lay tenderly around the base, but in a few places on the side had been blown into drifts and points.

The wild poppy of California, in May, is the most fascinating of all the flowers. It does not have a striped or spotty leaf, but is stained with a color which is a compromise between a tea-rose and an orange, and is as delicately flushed and graduated in hue as a perfect rose. I never tire in studying their color, in masses or singly While driving to San Mateo, we came upon little clumps of them, springing out of the rocks on the edge of the road that overhangs the bay, and their vivid orange, upheld on graceful stems, and contrasted with the grey stones and the blue of the bay, gave me a joy which comes up as fresh while I write as when I saw it first. Another piece of cheer intrudes itself between my eyes and the paper, and insists that a note shall be made of it. I mean a California black bird, perched on a mustard-stalk ten feet high. The wild mustard grows luxuriantly on the lands at the foot of the bay. It is a great trouble to the farmers, for if the cows eat even a little of it—and they seem to like it for seasoning—it gives a pungent flavor to the milk, and makes the butter bite. But a field of it in brilliant yellow is decidedly a pleasing condiment to the general feast of colors. And when a blackbird, with a large spot of scarlet on each wing, flutters over a tall spear of it, and then alights with a cheery twitter, one has a picture before him which gives twofold delight by making him repeat the couplet of Holmes—

> The crack-brained bobolink courts his crazy mate,
> Poised on a bulrush tipsy with his weight.

If I quote wrongly, may the genial and always accurate

Professor forgive me. I repeat from memory, and must wait till the *Mameluke* arrives from Boston with my books, before I can verify a dozen passages of his, which the California scenery sets to music again in my brain.

And yet the old Californians, "forty-nine-ers," sigh when you speak in praise of the May-luxuriance around the bay. They say that the glory is over now. "Ichabod" is written on the landscape. They rode over the same districts when there were no roads, or ranches, or fences, between San Francisco and San José, and when the horses wallowed and galloped through an ocean of floral splendor. The visitor can not help noticing, when he leaves the base of the mountains and comes to the farms, how civilization has tamed the land. The barley, and wheat, and bearded sweeps of simple green, look cool and unromantic in contrast with the natural coat of many colors which the unplowed districts wear. The brindled leopard has taken the hue of the cat. It is only when, here and there, we come upon a garden, and see the blaze of roses which bloom the year through, that we see how superior art is to nature.—*T. Starr King, in Boston Transcript, July*, 1860.

CALIFORNIA SEEN THROUGH A GEOLOGIST'S EYES. REPORT OF A LECTURE ON THE "PHYSICAL GEOGRAPHY OF CALIFORNIA," BY PROFESSOR BLAKE.

PROFESSOR BLAKE'S subject was the "Physical Geography of California," not its paleontology or mineralogy, note, which might have been dull, but the very thing that every intelligent Californian aches to know—the appearance and peculiarities of our American Pacific slope, and how they came so. All this he treated in the quiet, easy method of one who knows what he talks about. His style is admirably simple and direct. The chiffonier of words could not have raked out a dozen unnecessary adjectives from the whole; the most industrious "boiler" of manuscripts could only "boil" it by omitting passages; the

herd of thoughts could scarcely be corraled within fewer words without danger of their breaking the stockade.

He opened with the suggestion, that perhaps we might turn with a sense of relief from the civil commotions of our country to the contemplation of some of those great natural laws under which we live, and from which there can be no secession. His topic was the anatomy and physiology of our State, which extends over nine and a half degrees of latitude, or six hundred and fifty miles—as far as on the Atlantic coast would reach from Boston to Savannah, and its area but little less than all New England, New York, New Jersey, and Pennsylvania put together. As the anatomist first disposes of the bony system of his subject, so the lecturer first considered the mountains of California. They are naturally separated into five groups—the Sierra Nevada, the Coast Mountains, the Bernardino Mountains, the Peninsular Mountains, and the Mountains of the Great Basin. That the eye of the audience might assist the ear in comprehending the lay of the land and its character, a large map of the Pacific slope was displayed, on which the mountains were sketched in brick color, the valleys in yellow, and the water in blue; and the general impression of the audience was that the brick color had the best of it—that the mountains rule the State. The Sierra, extending nearly six hundred miles, from the northern boundary to the head of the Tulare Valley, has no well-defined towering summit line, but two or more parallel ranges of nearly equal altitude, forming a double summit; at the north, these summit ranges are usually some twenty miles apart, with elevated valleys between. Magnificent Shasta, at the sources of the Sacramento, is the most prominent peak, rising into the region of perpetual snows, 15,000 to 17,000 feet above the level of the sea. It is an extinct volcano, and appears to belong rather to the Cascade Range than to the Sierra Nevada. Geologically, this chain, whose western face slopes long and gradually to the valley, but on the east stoops abruptly to the Great Basin, consists of granitic and metamorphic rock. The leading crests are a compact gray syenitic granite, flanked on the west by gneiss and

slates down to the foot of the slope. These slates are the prevailing rock after descending from the higher parts of the Sierra. They are very ancient palæozoic sedimentary beds, which have been uplifted from the bottom of former seas and crumpled like so many leaves of a book, till their broad flat surfaces stand on edge, and the hot vapors escaping from below have filled the cracks with quartz and gold. The lecturer paused to correct the absurd opinion that prevails so widely, that the geological character of the country differs totally from that of any other region. Within the past month he had found high up on the slope of the Sierra, the out-crop of a sandstone, which is known the world over as characteristic of gold and diamond-bearing regions —a peculiar rock which has been found in the Brazils, in the Urals, in India, and in the Atlantic States—and under the lee of which diamonds are almost invariably found. The more modern strata of the Sierra have already been identified as of the same age as those of the East—and the conclusion has been reached, that in the tertiary times the Pacific and Atlantic oceans were connected north of the tropic zone. Many of the eocene or early tertiary species of mollusks, found fossil at the southern end of the Sierra Nevada, are identical with those that existed at the same period on the former shores of the Apalachian, and are now dug up from the plantations of Georgia and Alabama.

A much more modern system of mountains are the Coast Range or Ranges, for they are not one chief ridge as formerly supposed, but several, lying parallel with each other, with a series of long parallel valleys between. In our latitude there are three ridges—the western, on which our city is enthroned, the central, or Contra Costa Range, and the eastern, or Diablo Range. There is a similar series at Monterey. The breadth of country occupied by the Coast Ridges and their valleys, varies from forty to one hundred miles. Here and there we find a granitic axis and volcanic rocks, but their principal substance is composed of the tertiary and secondary formations. The strata are disposed in great wave-like flexures, and abound in fossils. They are the very paradise of palæontologists. Here the

lecturer diverted from his course to read the story that the new-found coal beds tell of the time when the Sierra Nevada fronted on the Pacific; when there was no Coast Range like a great sea-wall outlying them; when the rivers from the Nevada slope emptied directly into the sea, forming great deltas that supported luxuriant forests, now compacted and transmuted into coal; and such he thought probably were the conditions of our region until the period of the pliocene tertiary.

The characteristics of the Bernardino Range—the southern rim of the Great Basin—more modern than the Sierras, yet far older than the Coast Ranges, and of the Peninsular Mountains that abut almost at right angles upon the Bernardino and lift one perpetual ridge of jagged outlines, until at Cape St. Lucas they sink into the sea, were dispatched more briefly. The mountains of the Great Basin are all in parallelism with the Sierra, as are the Rocky Mountains. To the geologist, they seem only like a succession of folds in the strata—or, as one might say, petrified wrinkles in the earth's hide.

Mr. Blake next called attention to the connection between the direction of the mountain chains and the form and extent of the coast line. The rocky ranges, lying broadside to the sea, preclude it from cutting harbors into the coast, yet it is remarkable, the absence of those deep, precipitous inlets so characteristic of rock-bound coasts in high latitudes. To the fact that there is one notable exception, we owe our matchless harbor. The Golden Gate, though not a fiord, is one of the most noteworthy breaks in a coast range known. There does not appear to be any dislocation, or sliding, or "fault" of the strata, but the Gate has more the appearance of a fissure widened by the currents. By the map he clearly showed by what a happy arrangement the Bay of Monterey was formed between the end of one long range and the side of another, and again at San Luis Obispo, how the Pacific excavates inland between the diverging ranges; how the islands that lie parallel to the Santa Inez Range of the Bernardino are the peaks of a submerged range, while the Santa Barbara channel occupies

the subaqueous valley; how the seven Farallones, all in one straight line, twenty miles off the Heads, are the crest-points of a range that takes to the water off Monterey. So the bottom of our Pacific Sea, off many a mile, is all mountain and valley—not like the Atlantic submarine slope, which falls off gently from the flat shore to the deep sea soundings.

To round more perfectly our idea of the hydrography of the coast, Professor Blake pictured it as it would look lifted three hundred feet above its present level. Then the Farallones would stand out the peaks of a continuous range of mountains, on the eastern side of which would lie the harbor of Monterey. New islands would appear, the Bay of San Francisco would be drained, and the great rivers be prolonged through it and the Gate seaward. Then he sketched the vision that would be presented if the whole region were sunk five hundred feet below its present level. The Pacific would flood the Sacramento, San Joaquin and Tulare valleys. The hills of San Francisco would be submerged. The Golden Gate would be widened two or three miles, with an occasional island rising here and there. The San José valley would be flooded, and the waters connecting with those of the Bay of Monterey would leave the Santa Cruz and San Francisco mountains as islands lying parallel to the Contra Costa and Diablo ranges. Los Angeles would go under, and the Gulf of California—Cortez's Vermilion Sea—would push two hundred miles farther north. But this, instead of being a fancy sketch, was probably a true picture of California as it existed *not long since*—speaking after the manner of geologists. That it was so is shown in many places, but nowhere so distinctly perhaps as at the upper end of the Tulare Valley, where hills of horizontal strata are now strewn with the teeth of sharks, ten or twelve different species, all of which are believed to be still living in the adjoining ocean. The first recognition of the existence of the mackerel family in the Pacific was by Agassiz, from their teeth [which, we may add, the lecturer collected on these hills eight years ago]. Since then, the fishermen have brought in living specimens.

The mountains settled, Professor Blake next took his

audience to the valleys, which he disposed in four groups—the low and broad valleys, whose extent makes plains of them, the elevated mountain valleys, the plateaux of the Great Basin, and the river valleys or cañons. Among the first group is the great valley lying between the Sierra Nevada and the Coast Range, its area over 16,000 square miles, more than the combined areas of Massachusetts, Rhode Island and Connecticut. We can not stop to reproduce, even "in little," the lecturer's graphic picture of this valley, in which so much of New England might be cradled without cramping; a valley that, except along the courses of the streams, and where its slope up the foot of the hills may be shaded with oaks, is treeless and even shrubless, its surface in the dry season parched and free from grass, its temperature by day rising often from 100 to 110 degrees, and the mirage constantly deluding the traveler along it. But his sketch of the Colorado Desert, which he included in his first group of valleys, we must not pass without remark. He pronounced it as fine a specimen of the desert as that of Libya or Sahara. It extends from the base of San Bernardino southwesterly 180 miles, part of its surface being below our boundary line in Sonora. Its area is some 9,000 square miles; and excepting the Colorado, which cuts across its lower end, is without river or lake. It stretches off to the horizon on all sides without one glimpse of vegetation or life. Its surface is ashy and parched; its frame of mountains rise in rugged pinnacles of brown rock, bare even of soil. Words are unequal to the task of describing its apparent expanses, the purity of its air, the silence of its night, the brilliancy of the stars that overhang it, the tints of the mountains at daybreak, the looming up of those beyond the horizon, the glare of the midday sun, the violence of its local storms of dust and sand. Parts are entirely destitute even of sand, being smooth, compact, sun-baked clay; other parts are covered with heaps of sand, disposed like snow-drifts in waves of fifty or eighty feet in height. Near the mountains along the Colorado, there is a terrace as flat as a floor and paved with pebbles of nearly uniform size, of porphyry, jasper, quartz, carnelian, and agate, all

rounded by the action of water, and polished till they glisten, by the driving sand. In this respect, again, the porch of our Great Desert is like that which outlies the Lybian Desert. Doubtless the northern part of the desert is the dry bed of an ancient lake of fresh water, whose beach lines are strongly marked. Probably, at a comparatively recent period, the waters of the California Gulf covered all the clay surface of the desert. It lies below their level now, and if a channel were cut through the natural embankment of the Colorado, it would doubtless be covered again with water. It was very probable that the Colorado Desert region was uplifted within *historic* times. Earthquakes occasionally agitate its surface, and in 1852 there were eruptions of mud and hot water in the central parts of the valley.

Next were rehearsed the characteristics of the Great Basin, so named by Fremont, and of the newly discovered "Death's Valley," east of Owen's Lake, which by the barometrical readings lies at least 377 feet below the level of the sea—the bed of a dried-up lake covered with layers of salt from one to three feet in depth, while all the water about it is bitter and nauseating—an American Dead Sea, whereof the sea has died out literally.

Then the lecturer came to consider the climate of California, which is distributed in zones that lie parallel, not to the equator, but to the coast, following the trendings of the mountains To account for it, he described first the climatal characteristics of the land, and then the great currents of the Pacific. California has no *one* climate, but several; as a whole, it nearer approaches that of Spain than of any other portion of Northern Europe. The air over the great valley, being heated by the sun, rushes up along the slope of the Sierra as in a mighty chimney; and to supply this current, air is drawn inland through the breaks in the Coast Ranges, as through a blower. The Golden Gate, being the broadest depression in the range, and leading directly to the interior, is the great draught-channel for the valley furnace. The air thus drawn in comes to us chilled by contact with the cold waters of the North, and laden with their mists. The fury with which it is drawn inland around the barriers that,

both north and south of us, force it to seek the Gate, raises the sand of the ocean beach, and piles it in wave-like hills over the site of our city. But this beautiful phenomenon we need not stop to describe, as every day, at this season, we see it repeated. The climate of the California Desert is peculiar to itself, and finds no counterpart this side the deserts of Africa and Asia. Here, as in the Sacramento valley, the hot air rising between the mountain barrier, sucks in through the San Bernardino Pass another such a gale as is always, of a summer day, rushing through the Golden Gate. The sand that the gale bears along cuts deep grooves in the granite, and polishes its surface. Striking against a vertical granite wall, it wears away the minerals of which it is composed with different speed, according to their varying hardness. The soft feldspar succumbs first; then the quartz, and the garnets last of all. So the projecting masses that face the wind all stand tipped with polished garnets that point, like jeweled fingers, to the source of the wind. The hottest place known in the United States is Fort Yuma, at the junction of the Gila and Colorado, where the thermometer frequently ranges at 117° in the shade.

Professor Blake argued the reasons of the bracing effect of the coast climate, which permits so much greater amount of physical and mental exertion without fatigue than any other region known; and queried whether it was not due to the unobstructed "actinic rays" of the sun-beams reaching us through a dry cloudless atmosphere. The abundance of actinic rays he held to account for the unusual brilliancy of the flowers, and to be proved by the general absence of clouds, and the reflection of the parched light-colored soil during the dry season. The next topic was the vegetation of California, but the little space at our command to-day forbids us to follow another step the lecturer through this most interesting portion of the evening's entertainment. We must again express our regret that some one of the gentlemen who sat behind the lecturer, did not avail themselves of their privilege, while providing a glass of water for him, to whisper "louder" in his ear, or that in the audience there was not one man ill-bred enough to shout "louder"

at the start. Mr. Blake has voice enough, but, probably not suspecting that more was wanted, he did not let it out. This alone prevented every person from feeling when he retired, that this was one of the most profitable and deliciously refreshing lectures that has been delivered in California for many a day.—*San Francisco Bulletin, July*, 1861.

"THE CHARGE OF THE LIGHT BRIGADE."

STEPHEN MASSETT says that during his visit to England, and while visiting the House of Commons, he was presented to the Earl of Cardigan, who was in command of the 11th Hussars and led the celebrated Charge of the Six Hundred at Balaklava. Being one of the first to recite in public Tennyson's famous lines, he had a natural ambition to deliver them in the presence of Lord Cardigan. A polite note was received from the Earl, inviting Mr. Massett to call upon him at his residence in Portman Square, where after rendering the poem to the Earl and his lady, the following graphic account of the fight was given him:—

At about 1 o'clock, after the Heavy Brigade had been attacked by the Russian cavalry, the whole of the cavalry division was considerably advanced toward the enemy. The Light Brigade was ordered to dismount to relieve their horses. Suddenly they were ordered to "mount." Aid-de-camp Captain Nolan came forward and told Lord Lucan, commanding the cavalry, that the Light Brigade were to attack the Russians in the valley. Lord Lucan rode up to Lord Cardigan and said: "It is Lord Raglan's order that the 'Light Brigade' is to attack the Russians in the valley." Lord Cardigan's answer was, saluting with his sword. "Certainly, my Lord, but you will allow me to inform you, that there is a Russian battery in front, one on each flank, and the ground on the flank is covered with Russian riflemen!" Lord Lucan's answer was: "I can not help that; it is Lord Raglan's positive order that the 'Light Brigade'

is to attack them." Lord Cardigan then formed his brigade of five regiments, with three regiments in the front line, and two in the second. Lord Lucan ordered Lord Cardigan's regiment, the 11th Hussars, back, so as to form a support on the left rear of the front line. Lord Cardigan immediately ordered the advance. After going sixty yards or so, Captain Nolan rode obliquely across the front, when a Russian shell fell upon the ground near Captain Nolan, and not very far from Lord Cardigan. Nolan's horse turned round and carried him to the rear. Lord Cardigan then led the brigade down to the main battery in front, about one mile and a quarter distant. On arriving at a position about eighty yards from the battery, the fire became very severe, and the officers were considerably excited, and had to be called to "be steady." Cardigan, at the head of his brigade, passed close by the muzzle of a gun, which was fired as he entered the battery. He then rode straight forward through the Russian limber carriages, and came up close to the Russian line of cavalry. His brigade did not follow him. Lord Cardigan was attacked by two Cossacks, slightly wounded and nearly dismounted. He fenced off the Cossacks, and gradually retired from others who were attempting to surround him. When he got back to the battery, they had all retired and diverged to the left. Lord Cardigan slowly retreated, and met General Scarlett, commanding the heavy brigade of the cavalry. Cardigan told him that the "Light Brigade" was destroyed. The brigade was then counted by his staff officer, and it was found that there were only 195 men left out of 650.

Lord Cardigan immediately rode off to Lord Raglan to report what had taken place. The first thing Lord Raglan said, in a very angry tone, was, "What, sir, could you possibly mean by attacking a battery in front, contrary to all the usages of warfare and the customs of the service?" To which Lord Cardigan replied, "My Lord, I hope you will not blame me, for I received a positive order from my superior officer in front of the troops to attack them, and I was quite as well aware of the unusual course of proceeding ordered." Lord Raglan inquired what had been done.

To which Lord Cardigan replied, that "he had led the brigade into the Russian battery; that he had ridden up to the Russian cavalry; that he was not followed by the brigade; was wounded and nearly dismounted, and had some difficulty in getting away from a number of Cossacks; that the brigade was nearly destroyed, there being only 195 remaining."

The whole of this memorable affair occupied the brief time of *twenty minutes!*

THE EIGHTY-EIGHTH ANNIVERSARY OF THE FOUNDATION OF SAN FRANCISCO.

From the Alta California, October 9, 1864.

THE Mission of San Francisco was founded on the 9th October, 1776, eighty-eight years ago; and the present city of San Francisco, being the successor of that Mission, may consider this as its own anniversary. As such we shall treat it, and we shall do honor to the day, by making it the occasion of stating the manner in which the Mission was founded, and narrating a few events of its early history.

THE DISCOVERY OF THE BAY OF SAN FRANCISCO.

It is supposed that the Bay of San Francisco was first discovered in the month of October, 1769, by the Friar Juan Crespí, who had started from San Diego on the 14th July previous, at the head of a party of soldiers, with instructions to found a Mission on the Bay of Monterey. Coming northward he reached that bay near the mouth of the Salinas River, and finding no harbor there, he determined to continue his journey in the hope of finding a better site for a Mission. He found a magnificent bay, believed that he was the first white man to discover it, and named it, after the founder of his monastic order, San Francisco. Thus it was that the bay obtained the name which it still has, and which has been communicated to the Mission and city.

THE PATRON SAINT OF OUR CITY.

Our city bears the name of a man who is regarded as a saint by the Catholic Church, who founded the order that established all the Missions of Upper California, in whose especial honor this Mission was established, and who was regarded as its patron saint, in accordance with Catholic custom, which allows or requires every church and mission to be "under the invocation" of some saint, whose pleadings before the Throne of Grace shall secure especial blessings for it.

San Francisco de Assisi, as he is called in Spanish, or St. Francis, as we call him in English, was born at the town of Assisi, near Rome, in the year 1182. His family name was Bernardone; his baptismal name, Giovanni, which latter title was neglected and Francisco substituted in common use, because of his familiarity with the French tongue. He was a wild boy and a dissolute young man; but after having been imprisoned a year as a captive taken in war, and subsequently confined to his bed by severe illness for a considerable time, he repented for his sins, at the age of twenty-four gave up his wealth, distributed his rich clothing among the poor, and devoted himself to a life of beggary, poverty, prayer, chastity, penance, and charity. He regarded the injunction of Jesus to the Apostles to take "neither staves, nor scrip, nor bread, nor money, nor two coats," as binding upon all teachers of the Christian religion, and especially upon himself, so he laid up nothing for the morrow, would own no property, and would wear no dress save one woolen gown tied at the waist by a hempen cord. That was a time when penance was regarded as meritorious, and when industry and provision for the future were not virtues. Those features in the conduct of Francis which find the least commendation in this age, attracted the most admiration in that; and in a few years he was surrounded by a number of imitators who besought him to organize them into a body, so that they might have their convents and act under a regular system. He consented, and the order still exists. He died on the 4th of October, 1226.

Some of his writings have been preserved, but they possess no literary merit.

THE FRANCISCAN ORDER.

The Franciscan Order of friars soon rose to great importance. Forty years after the death of the founder it numbered two hundred thousand members. It was for a long time considered as the leading monastic order of the Catholic Church, and still numbers about eighty thousand friars. Their rules of life were the same as those of their founder. Their dress was dark-brown in color, and of coarse material. Many of their leading men abandoned wealth and power to become mendicants and monks. After the Reformation they took an active part in missionary enterprises, especially in New Spain, as the Spanish Colonies in North America were called previous to the War of Independence. Among their other enterprises they formed the first white settlements in Upper California.

THE EXPEDITION TO FOUND SAN FRANCISCO.

The Mission of San Francisco de Assisi was founded by Friars Francisco Palou and Benito Cambon, at the head of a party which started from Monterey on the 17th June, 1776. In the party were seventeen soldiers, under command of Lieutenant José Moraga. All the soldiers, and seven colonists, took wives and children with them. There were servants, packers, vaqueros, two Indian servants of the friars, and two Monterey Indians, brought in the hope—which proved to be vain—that they might serve for interpreters. Accompanying this expedition were a train of pack-mules, laden with provisions, grain, and tools, and a number of horses, cows, and sheep, that might serve as the beginning of the herds of the future Mission. After a journey of ten days they arrived, on the 27th June, at Washerwoman's Lagoon, just west of the present Russian Hill, and there they camped and erected fifteen tents. The Indians of the vicinity came to them in a friendly manner, and received presents of beads, which they repaid with

donations of grass seeds. Then, next day, a hut was made of the boughs of trees, and Palou said mass in it.

It had been arranged that a little vessel should leave Monterey with more men and supplies in a few days after the departure of the land party, but it did not arrive until the 18th of August. Meantime land parties were sent out to examine the peninsula. The men of the land party and the sailors built wooden houses thatched with *tulé*, at the places selected for the Presidio or fort, and the Mission. Solemn possession was taken of the Presidio on the 17th of September. The friars said mass, hoisted and adored the banner of the Holy Cross, the commandant took possession in the name of the king of Spain, and salutes were fired with artillery and musketry. The packet boat sailed northward to survey the bay in that direction, and a land party followed its shores on the south and east. At the end of a week they returned, having satisfied themselves that the best place for a religious establishment was near the Presidio.

THE FOUNDATION OF THE MISSION.

On the 9th of October the Mission was founded. A procession, comprising the entire male population—soldiers, settlers, and sailors—headed by the priests, who bore aloft the banner of the Cross and a statuette of St. Francis, marched from the Presidio to the Mission, where the sacred objects were placed on the altar. Father Palou, as the senior friar, chanted a mass and preached a sermon about the founder of his order, as the patron saint of the Mission. At proper intervals in the sacred ceremonies, the soldiers and sailors fired salutes of musketry, in accordance with the custom of their country. No corner-stone was laid, no mason declared that the building had been commenced in "due form and workmanlike manner." Those were forms neither customary nor necessary.

The site first chosen for the Mission was on the western shore of Washerwoman's Lagoon. Father Palou, whose biography of Junipero Serra contains the only printed record of these events, says:—

"Se determinó empezar á cortar madera para las fabricas

del Presidio cerca de la entrada del puerto y para las de la Mision en este mismo sitio de la Laguna, en el plan ó llano que tiene al Poniente."

This we translate as follows :—

"We determined to begin to cut wood for the buildings of the Presidio near the entrance of the port, and for those of the Mission in the same site, on the level place west of the lagoon."

We have no information when the Mission was moved to its present place.

No Indians were present at the foundation of a Mission established for their conversion. The tribe which then occupied the northern part of this peninsula was then engaged in a war with another tribe called Salsones, who lived at the place now known as San Mateo. These Salsones, in the middle of August, surprised the San Francisco Indians, killed many of them, wounded others, and burned their rancherias. The Spaniards knew nothing of the affair until too late. The San Francisco Indians then fled on rafts of tulé, some to the islands in the bay, and others to the opposite shore, where they remained until the next March.

The first missionaries in charge of the Mission of San Francisco were the two who were present at its foundation—Francisco Palou and Benito Cambon. The latter was a man of no special note, but Palou was a man of promise. He was a peculiar favorite with Junipero, whose biography he wrote after his return to the city of Mexico, where he became Superior of the Convent of San Fernando, the chief establishment of the order on the American continent.

The first baptism of an Indian at the new Mission took place on the day of St. John the Baptist, 1777, and within seven years from that time, four hundred others were declared converts to Christianity, and received into the Church. Father Junipero visited the Mission only once, and then spent ten days—from the first to the tenth of October, 1777. As for the subsequent history of the Mission, we shall now mention only a few facts.

In 1800 the friars reported that they had 647 Indian con-

verts, 7,080 neat-cattle, 6,238 sheep, 999 horses, and an annual yield of 5,000 bushels of grain, under which are included, wheat, barley, maize, beans, and pease. In 1805 there were 10,000 neat-cattle, and 11,000 sheep; but soon after that the political troubles of Mexico arose, and the Missions, San Francisco among them, began to suffer, and in 1835 their property was seized, and they ceased to have any influence as Missions.

THE EAST AND THE WEST.

[This poem was written by Theodore Winthrop, and after his death was found among his unpublished papers.]

We of the East spread our sails to the sea,
You of the West stride over the land;
Both are to scatter the hopes of the free,
As the sower sheds golden grain from his hand.

'Tis ours to circle the stormy bends
Of a continent—yours, its ridge to cross;
We must double the capes where a long world ends,
Lone cliffs where two limitless oceans toss.

They meet and are baffled 'mid tempest and wrath,
Breezes are skirmishing, angry winds roar;
While poised on some desperate plunge of our path,
We count up the blackening wrecks on the shore.

And you through dreary and thirsty ways,
Where rivers are sand and winds are dust;
Through sultry nights and feverish days,
Move westward still as the sunset must;

Where the scorched air quivers along the slopes,
Where the slow-footed cattle lie down and die;
Where horizons draw backward till baffled hopes
Are weary of measureless waste and sky.

Yes, ours to battle relentless gales,
And yours the brave and the patient way;
But we hold the storms in our trusty sails,
And for you the life-giving fountains play.

There are stars above us, and stars for you—
Rest on the path and calm on the main;
Storms are but zephyrs when hearts are true;
We are no weaklings, quick to complain,

When lightnings flash bivouac-fires into gloom,
And with crashing of forests the rains sheet down;
Or when ships plunge onward where night clouds loom,
Defiant of darkness and meeting its frown.

These are the days of motion and march;
Now we are ardent, and young, and brave;
Let them that come after us build the arch
Of our triumph, and plant with the laurel our grave.

Time enough to rear temples when heroes are dead,
Time enough to sing pæans after the fight;
Prophets urge onward the future's tread,
We—*we* are to kindle its beacon-light.

Our sires lit torches of quenchless flame
To illumine our darkness, if night should be,
But day is a friend to our standards, and shame
Be ours if we win not a victory!

Man is nobler than men have been,
Souls are vaster than souls have dreamed;
There are broader oceans than eyes have seen,
Noons more glowing than yet have beamed.

Creeping shadows cower low on our land;
These shall not dim our grander day;
Stainless knights must be those who stand
Full in the van of a world's array!

When shall we cease our meager distrust?
When to each other our true hearts yield?
To make this world an Eden, we must
Fling away each weapon and shield.

And meet each man as a friend and mate,
Trample and spurn and forget our pride;
Glad to accept an equal fate,
Laboring, conquering, side by side.

AN INTERESTING EVENT IN CALIFORNIA HISTORY.

From the Sacramento Union, September, 1859.

N an article on the Pioneers on Friday allusion was made to the festive proceedings attending the signing of our State Constitution by the members of the Monterey Convention. It was stated that the Constitution was signed on the 3d of September, a mistake which we were led into by similar bad authorities to those which we have seen disputing as to whether the State was admitted on the 9th or 10th of September. The event, which is very gracefully portrayed in the following sketch from an old number of the *Alta California*, took place on the 13th of October. We believe the article copied below has never been republished before:

SIGNING THE CONSTITUTION. — The thirteenth day of October, in the year 1849, was one of those eventful epochs in the history of California which will ever be a day of remembrance and interest—the beginning of a new era!

It was a day of beauty and sunshine. The sun rose in all his might, and as he went higher and higher in the heavens, the ocean mist that hung lazily upon the pleasant town of Monterey, and seemed dallying softly with the placid waters of the lovely bay, gradually shrunk from his amorous embrace, until it had rolled up the hill-sides, and died away, leaving its last kiss upon the crests of the stately pines. And as the day grew brighter and hotter, a balmy breeze swept gently past—so gentle that it did not ripple the quiet waters—so cool that it seemed to soothe and calm all unworthy and restless desires—and yet so potent that it filled the mind with great thoughts that appeared to have been called into being by the softened booming of the mighty breakers of the Pacific, which the zephyr bore ever with it.

Such was the day on which the Constitution of the State of California was signed by the delegates in Convention assembled, at Colton Hall, in the city of Monterey.

According to previous arrangements, at a little before three o'clock, P. M., the President of the Convention appeared in the hall, leaning on the arm of his son, having risen from his sick bed to be present at this last important act in the drama. At a few minutes past three, preliminary matters having been disposed of, the delegates commenced the signing. Scarcely had the first man touched his pen to the paper when the loud booming of cannon resounded through the hall. At the same moment the flags at the different head-quarters, and on board the shipping in the port, were slowly unfurled and run up. As the firing of the national salute of thirty-one guns proceeded at the fort, and the signing of the Constitution went on at the hall, the captain of an English bark then in port paid a most beautiful and befitting compliment to the occasion and the country, by hoisting at his main the American flag above those of every other nation, making, at the moment that the thirty-first gun was fired, a line of colors from the main truck to the vessel's deck. And when, at last, that thirty-first gun came—the first gun for California—three as hearty and as patriotic cheers as ever broke from human lips were given by the Convention for the new State.

It was an hour of patriotic and noble feelings—an hour fraught with impulses and resolves such as pen can not describe. Those who had labored to lay the foundations of the new State—coming from different nations and climes—felt that, from that hour, they were one. One hope animated them—one wish nerved them—one impulse guided them; that hope, that wish, and that impulse was—California! The American hearts beat strongly and proudly, as they felt that *they* had planted the flag under which they were born and reared upon this wild western shore of the new continent—the alien felt that only where that flag waved was found the home of those who fled from tyranny—the Californians were convinced that they were conquered but to become the brothers and friends of the conquerors.

But the most interesting and affecting part of the proceedings of the day was the call by the delegates, after the

adjournment, upon the Governor. The veteran pioneer, Captain John A. Sutter, had been appointed by unanimous resolution, to address General Riley, on behalf of the Convention, and on its dissolution, the delegates, with the sergant-at-arms at their head, proceeded in a body to the mansion of the "Hero of Contreras." Arrived there, they were welcomed by a kind salutation and a cordial shake of the hand; after which Captain Sutter thanked the General, in a short and neat speech, for the aid and assistance he had so freely given the Convention in the prosecution of its labors, and trusted that the people of California would be as fortunate hereafter in obtaining a Governor whose firmness, moderation and patriotic exertions for their welfare had won for him greater glory than had come to him from the blood-stained fields of Mexico.

The General's reply was one of the happiest efforts of the kind we ever listened to. It could not be called a speech; for it bore no relation to the *fustian* of which such articles are usually manufactured; but it was a simple, fervent and eloquent recital of a patriotic desire for the good of California. He did not profess to make a speech—he had never made a speech in his life—and even if he were a professed speech-maker he did not doubt that the occasion and the expression of the Convention's thanks would overcome him, as it did now, and prevent his utterance of the emotions of gratitude with which his heart was full. He had labored to the utmost of his ability to promote the interests of this country, and though he did not expect to be one of her citizens, he felt it to be the proudest day of his life when he could say that he had assisted in laying the foundation of that glory and greatness which he foresaw would soon be the portion of the new State of California. No! Not even amid the smoke and carnage of battle, or the enthusiasm and glory of victory, had he ever felt so full of devotion to his country and her progress, so desirous to promote and defend her interests and her fame, or so grateful that he had been permitted to become an humble instrument in the advancement of the greatest of modern republics.

At the conclusion of General Riley's remarks, three cheers

were given for "the Governor of California," three for "Captain John A. Sutter," and three more for the "New State;" and then, after partaking of the refreshments provided by the hospitality of the Governor, the company separated to make their final preparations for departure to their respective homes.

Such was the day, such the ceremonies, and such the auspices under which California struck her first blow for admission into the Union. It was a day that can never be forgotten; for with it is linked all of good and evil that is to befall her in her new and untried path. The day itself was typical of the feelings of those who were intrusted with the high mission of forming a Constitution. When the morning sun rose in mist and gloom, doubts and sadness filled their minds. They felt that theirs was a heavy responsibility; that the instrument they were about to sign must become the source of power, greatness, and fame to a mighty State, or the impediment to all these, or perhaps its ruin. And they were thoughtful and anxious, though they were assured in their hearts that they had acted honestly and patriotically. But, as the day grew older, the chilling fog disappeared, and with it went all fear and gloom, and there grew up instead a firm resolve to go forth and labor well and patiently for the accomplishment of that destiny which is to make the United States the greatest of republics, and California the EMPIRE STATE OF THE PACIFIC.

COMMERCE OF THE WORLD.

RANCE exports wines, brandies, silks, fancy articles, jewelry, clocks, watches, paper, perfumery, and fancy goods generally.

Italy exports corn, oil, tar, flax, wines, essence, dye-stuffs, drugs, fine marble, soap, paintings, engravings, mosaics, and salt.

Prussia exports linens, woolens, zinc, articles of iron, copper, and brass, indigo, wax, hams, musical instruments, tobacco, wines, and porcelain.

Germany exports wool, woolen goods, linens, rags, corn, timber, iron, lead, tin, flax, hemp, wines, wax, tallow, and cattle.

Austria exports minerals, raw and manufactured silk, thread, grass, grain, wax, tallow, nutgall, wines, honey, and mathematical instruments.

England exports cotton, woolen, glass, hardware, earthenware, cutlery, iron, metallic wares, salt, coal, watches, tin, silks, and linens.

Russia exports tallow, flax, hemp, flour, iron, copper, linseed, lard, hides, wax, duck, cordage, bristles, fur, potash, and tar.

Spain exports wine, brandy, oil, fresh and dried fruits, quicksilver, sulphur, salt, cork, saffron, anchovies, silks, and woolens.

China exports tea, rhubarb, musk, ginger, zinc, borax, cassia, filegree works, ivory ware, lacquered ware, and porcelain.

Turkey exports coffee, opium, silk, drugs, gums, dried fruits, tobacco, wines, camel's hair, carpets, shawls, and morocco.

Hindostan exports silks, shawls, carpets, opium, saltpeter, pepper, gum, indigo, cinnamon, cochineal, diamonds, pearls, and drugs.

Mexico exports gold and silver, cochineal, indigo, sarsaparilla, vanilla, jalap, fustic, campeachy, wool, pimento, drugs, and dye-stuffs.

Brazil exports coffee, indigo, sugar, rice, hides, dried meats, tallow, gold, diamonds and other precious stones, gums, mahogany, and india rubber.

West Indies export sugar, molasses, rum, tobacco, cigars, mahogany, dye-wood, coffee, pimento, fresh fruits and preserves, rubber, wax, ginger, and other spices.

Switzerland exports cattle, cheese, butter, tallow, dried fruit, lime, silks, velvets, laces, jewelry, paper, and gunpowder.

East Indies export cloves, nutmegs, mace, pepper, rice, indigo, gold dust, camphor, benzoin, sulphur, ivory, rattans, sandal wood, zinc and nuts.

United States exports principally agricultural produce, cotton, tobacco, flour, provisions of all kinds, lumber, turpentine, and wearing apparel.

SECRET WRITING.

UCH has been said on the subject of secret writing, and many methods devised for conveying private or important messages in such a way that, if they fall into improper hands, their meaning will be safe from detection. Sympathetic ink is sometimes used, which is so made that the writing disappears in a short time, but again becomes visible on the application of heat or some chemical preparation. But secrets thus sealed, are readily unsealed by any chemist. The most common method is to construct a cipher, in which new and strange characters stand for letters or words, or one word stands for another, or the words to be read are mixed with other words, but placed in some determined order. But few, if any, of these are beyond the reach of an ingenious mind to interpret. And it is not so much guess-work as many people suppose. In unraveling a difficult cipher numerous experiments have to be tried, but the operations are all based on comparison, and should be regular and systematic.

Poe, in his story of "The Gold Bug," gives some valuable hints on the interpretation of the most common cryptographs. He contends that the ingenuity of man can construct no enigma which the ingenuity of man can not unravel. And he actually read several very difficult ciphers which were sent to him after the publication of "The Gold Bug."

But we saw, several years ago, a method which makes the message absolutely safe from detection. We will try to describe it.

Take a square sheet of paper, of convenient size, say a foot square. Divide it by lines drawn at right angles, into

five hundred and seventy-six squares, twenty-six each way; in the upper horizontal row write the alphabet in its natural order, one letter in each square; in the second horizontal row write the alphabet, beginning with B. There will then be one square left at the end of this row, into this put A. Fill the third row by beginning with C, and writing A and B after Z at the end. So on, until the whole sheet is filled.

When completed, the table, if correct, will present this appearance: In the upper horizontal row the alphabet in its natural order from left to right; in the left hand vertical row, the same from top to bottom; and the diagonal, from upper right to lower left hand corner, will be a line of Z's.

THE CRYPTOGRAPH.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A
C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B
D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C
E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D
F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E
G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F
H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G
I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H
J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I
K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J
L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K
M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L
N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M
O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N
P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y

Each party must have one of these tables. A key-word must also be agreed upon, which may be any word in the English language, or from any other language, if it can be represented by English letters, or, indeed, it may even be a combination of letters which spells nothing.

Now, to send a message, first we write the message in plain English. Over it we write the key-word, letter over letter, repeating it as many times as it is necessary to cover the message. Take a simple case as an illustration. We suppose the key-word to be "Grant," and the message, "We have five days' provisions." It should be placed thus:

G r antg rant gran tgrantgran
We have five days provisions.

Now find, in the upper horizontal row of the table, the first letter of the key-word, G, and in the left hand vertical column the first letter of the message, W. Run a line straight down from G, and one to the right from W, and in the angle where the two lines meet will be found the letter which must be written as the first letter of the cipher. With the second letter of the key-word, R, and the second letter of the message, E, find in the same way the second letter of the cipher.

The correspondent who receives the cipher, goes to work to translate it thus: He first writes over it the key-word, letter over letter, repeating it as often as necessary. Then finding in the upper row of his table the first letter of the key-word, he passes his pencil directly down until he comes to the first letter of the cipher; the letter opposite to it in the left vertical column is the first letter of the translation. Each of the succeeding letters is found in a similar way.

A third party, into whose hands such a cipher might fall, could not read it, though he possessed a copy of the table, and knew how to use it, unless he knew the key-word. The chance of his guessing this is only one in millions. And there is no such thing as interpreting it by any other method, because there are no repetitions, and hence all comparison is at fault. That is to say, in the same cipher, in one place a letter, as for instance C, may stand for one letter in the translation, and in another place C may stand for quite a different letter. This is the only kind of cryptograph we have ever seen which is absolutely safe.

ON A DRIED WILD-FLOWER.

In an old School-Book.

Relic of early days! My casual hand
Hath made discovery of thy long retreat,
As carelessly I turned the time-worn page,
Unconscious of its import; for my thoughts
Were idly roving—not on learned lore,
Or marked and measured task. I look on thee,
Poor withered thing! and memory's current flows
Back, back, upon the past. Shriveled and sear
Is all thine aspect now, pris'ner of years!
Yet hath it woke remembrance of bright days
And sunny scenes of nature, trodden oft
By my feet in childhood; it hath woke
The echoes of sweet voices in my heart—
I see again the light of happy eyes—
I mingle with the early loved, and tread
With them familiar pathways. Where, oh, where
Hast thou been gathered? Was't in the shady walk
Far in the woodlands, where the beech-trees stretch
Their long embracing branches, forming there
A cool continuous arbor? Grewest thou
Beside that stately stem, whose graven bark
Tells of its frequent loiterers? Or didst
Thou spring from some small cleft upon the rock
That venturous steps were needed to attain?
Wert thou the spoil of some loved playmate's hand?
Or did mine own thus bind and prison thee
In bondage grim and fast? so shrunk, so sear
Is all thine aspect now! Yet can I trace
In its wan lineaments the form of grace,
And can imagine the bright sapphire hue
Of each small petal, when the calyx burst,
And gave its incense to the morning air.
How many a time hath Spring awoke the woods,
And Summer to the blue perpetual skies
Unfolded all her flowers; how many a time
Hath morn succeeded night, the sunbeam waned,
And the cool air condensed itself in dew,

Since thou, their nursling, in thy beauty blooming
Wert here entombed, to fade and be forgot!

Sleep on, poor flow'ret; softest showers of Spring,
And all sweet influences of nature, now were vain
Thy colors to revive, or bring to thee
The loveliness of life; as vain, alas,
As wishes are to fill the longing heart—
As vain as bitterest tears or deepest sighs
To bring again the lost. Ah, could we turn
And search the storied pages of the heart,
What withered flowers were found! Fair buds of Hope
Gathered in dewy hours of life's young morn,
And garnered in their freshness, faded now
And bleached by disappointment, cherished joys
Shrunk into memories that awaken tears—
And loves, and friendships, once expanded flowers
Roseate and beautiful—all, all are there!
Sleep on, poor flow'ret; not unmarked from hence
Thy place of sepulture: with loving hands,
And chastened thought, reluctantly once more
I close the book upon thy faded form.

HISTORY OF THE DISCOVERY OF GOLD IN CALIFORNIA.

Queries, submitted as to the man who discovered the present Gold Mines, and the date of their Discovery.

IOWA HILL, PLACER COUNTY, *January*, 8, 1856.

DR. C. E. PICKETT: I suppose you have seen the many communications which have flooded the papers lately with regard to the question—Who was the first discoverer of the present gold mines in California? You were one of our first American settlers, and also the publisher of a paper which has been referred to in one of said communications, and I have been requested by Mr. Marshall to make a few inquiries of you.

1. Have you any recollection of the publication of an article in the *Oregon Spectator* in 1846 or '47, which gave a "graphic description" of the mines of California. [Such was lately said to be the fact by a writer in the California *Chronicle.*]

2. Do you recollect that an agent was sent from California to Oregon, to solicit aid for the immigrants in California, to enable them to make a successful resistance against any attempt to drive them out of the country? [Such has been said to be the fact.]

3. What representations, if any, did that agent make to the Oregonians to induce them to go to California? Did he not tell a good story, based probably upon the old Spanish report of mines existing in Southern California? And is not this the whole sum and substance of what has been referred to, to prove that the mines were known long before the time at which Mr. Marshall claims to have discovered the gold?

4. Do you not know that there was no mine worked for gold in Upper California, so far as the American public had any knowledge of it, before Marshall's discovery?

Please reply to the above as early as your convenience will permit, and oblige

S. G. HIGGINS.

REPLY OF MR. PICKETT.

AUBURN, *January* 20, 1856.

EDITORS CHRONICLE: About ten days since, I saw in a copy of the *Weekly Chronicle*, a communication on the subject of early gold discoveries in California, signed "N." The writer called upon ex-Governor Burnett, Governor Curry, of Oregon, and myself, to indorse certain statements of his, to the effect that the existence of gold throughout this State, was well known prior to the period of its discovery as claimed by Marshall. The perusal of various newspapers, editorials and communications, which appeared

during the previous month, written apparently to rob Marshall of the honor of his discovery, had incited me to write to you, but I was prevented from doing so by business affairs, up to the present time. At the request of yourselves, of your correspondent "N," and of Mr. S. G. Higgins, whose letter accompanies this, I now write.

To reply specifically to, and refute the many mis-statements about the early gold discoveries in California, which have frequently met my eye of late, is not my intention. Suffice it to say, that even the editor of the Coloma paper, where the first piece of gold was picked up, has, through misrepresentations, been induced to publish articles denying to Marshall the exclusive honor of being the first discoverer.

In answering Marshall's first query, which contains the substance of your request also, I would state, that no such information was published in the "*Oregon Spectator*," during the years 1846–7.

During 1847, and particularly in the fall of that year, there was quite an excitement in San Francisco and San José, on the subject of mineral discoveries. But this was mostly in reference to quicksilver and silver mines, which were reported to be rich and numerous in the hills and mountains bounding both sides of the valley of San José.

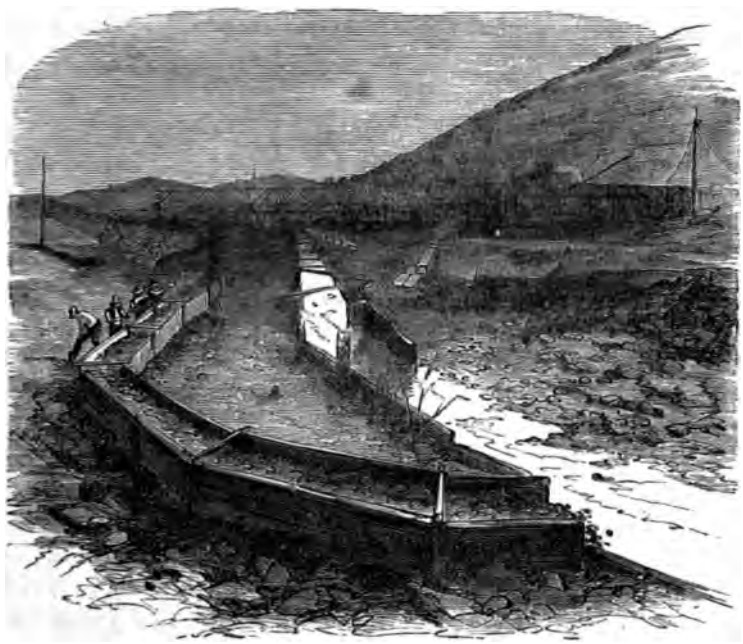
Toward winter this excitement subsided—all the silver mines having proved to be humbugs, and the various quicksilver mines having been thinned out, to the one then and now wrought by Bolton, Barron & Co., the New Almaden.

That the Oregon paper may, sometime in the year 1847, have published some speculations and rumors about the discovery of the precious metals in California, based upon such facts as are stated above, I shall not pretend to question.

In reply to the second query, I have to say that I have no knowledge that any agent was sent to Oregon to solicit aid, though such threats were made by the native Californians, and General Castro was actually making preparations to carry them into effect. Such a request was carried from the Americans in California by the immigrants, who went up

to Oregon in the spring of 1846, to come down and give a helping hand, when they not only intended to resist the attempt to expel them, but to start a revolution and take possession of the Government. The Bear Flag Revolution soon after proved the earnestness of this threat.

That the persons going from here to Oregon in 1846 told of the existence of gold in the land they had left, is altogether probable, since such fact was known ever since the first advent and settlement of the country by the Spanish race.



PLACER MINING.—Miners shoveling earth, containing gold dust, into a flume—the earth is washed away and the gold settles to the bottom.

In 1842 I met with men in the Rocky Mountains who had been here, and who told me the same thing. They were not the first to give such information, since I had read the same when a boy.

The first hide drogers and other traders who visited this coast, even as long ago as the last century, obtained small quantities of gold dust, washed from the earth in the south-

ern part of the State. The amount collected, however, was never large, as the way in which it was kept and carried for barter into market will go to prove. This was in goose quills, the same in which the tribute, or taxes, was paid to the old Aztec monarchs.

All this, however, had nothing to do with the great modern discovery of the "stuff" by Marshall, about the first of February, 1848. That the residents of California themselves knew not, nor believed in the existence, of these rich auriferous deposits, is proved by the fact that for weeks after the report of such discoveries had widely spread, and not until various individuals had brought down the dust in considerable quantities, and shown it to all inquirers, could the general incredulity be overcome. The month of May arrived before public confidence in the richness of the mines was fully established, and people thought it would pay to visit them.

This is not the first effort which has been made to rob Marshall of his priority of discovery. Some four or five years ago the papers in California, as well as a portion of those East, pretended to prove that Fremont made the discovery on his first visit here, in 1844—that he kept the matter secret for the purpose of making arrangements to enrich himself first, and also that Mexico might not be induced to demand too large a price from Uncle Sam for the country. The early purchase of the Mariposa claim, as alleged, is said to furnish strong evidence of his knowledge of its mineral wealth.

As evidence to the contrary, however, I happen to recollect that in the fall of 1847, Colonel Fremont, or rather his agent for him, was contending that the Mariposa grant did not include any of the Sierra mountains and hills, but was all, or nearly all, bottom lands, and so he meant to survey and hold it.

Another set of antiquarians have attempted to set Marshall down as merely a *re*-discoverer, by asserting that California is the veritable Ophir from whence that old Turk, of whom we read in the Bible, King Solomon, got the gold with which he ornamented the Temple at Jerusalem, and

adorned the numerous mistresses of his harem. In this assertion these learned men, however, go farther back than my observation and experience, and I shall not argue against them on this point.

Whilst encamped on the banks of the Klamath River on the 4th of July, 1846, the mineralogical character of the country was much commented upon by some of a company in which I was one. The remark was made that it ought to be rich in minerals, since, judging from its barren and desolate appearance, it could produce nothing else. Some stones were brought me by one of the party, indicating the existence of copper and iron. I jotted this down in my notes of travel, and remarked, in addition, as my journal will now prove, that I had no doubt that gold in abundance would be found in the course of a few years in that region. This prophecy has been fulfilled. Now, with far more truth and plausibility than some others who seek to deny to Marshall the fame of his discovery, might I claim upon these grounds that I had first pointed out and declared publicly the existence of gold in California.

There is a fact connected with this metal, which is, though generally overlooked, but, if kept in mind, would serve to correct the erroneous impression which many have relative to the traditional stories about old discoveries of it in California as well as other countries—and that is, that gold is the most universally diffused of all metals, there being few streams upon the globe flowing from mountains or hills (and nearly all rivers or streams take their rise in such) the sands of which do not contain particles of gold. It is found, besides, combined with various other metals, so that in most places, where thoroughly searched, gold in certain quantities has been obtained, and become the origin of many old traditional stories of discoveries of this mineral.

This communication is already sufficiently lengthened, or I might else give you many interesting incidents connected with the reopening and re-working of Solomon's mines in the year 1848. This I may shortly do in another chapter, should I find this prove of sufficient interest to your readers to warrant it.

C. E. PICKETT.

COMMENTS OF T. O. LARKIN.

CCOMPANYING the letter of Mr. Pickett, on the previous page, was a note, requesting us to inquire of Thomas O. Larkin, Esq., formerly U. S. Consul at Monterey, whether the statements in the letter were not correct, according to his recollection. Mr. Larkin, whose authority is excellent, as well on account of his opportunities to gain information, as of his intelligence, furnished us with a few notes, from which we compile the following :—

Previous to the year 1840, some Sonorians discovered a gold placer on the rancho of Don Ygnacio Valle, about twenty miles northeast of the ex-Mission of San Fernando. Many people worked at this placer up to the year 1846, making from two to three dollars a day. They never had much water, and they usually obtained the precious metal, by throwing the sand up with a *cora* (an Indian basket), and allowing the wind to blow away the lighter matter. The gold was frequently preserved in quills, and sold to the traders in Los Angeles. On one occasion, two hundred ounces [$3,600] of this gold was shipped to Appleton & Co., of Boston, by an agent, the supercargo of one of their ships.

In the spring of 1846, Don José Castro, *Commandante General* (Supreme Military Officer) of Upper California, though residing in Monterey, collected men at the ex-Mission of Santa Clara, for the purpose of deposing Pio Pico, the *Gefe Politico* (Political Chief or Governor) of the territory. Pico was then residing at Los Angeles. During this time the Americans, on the Sacramento were alarmed by a report that Castro and Alvarado had instigated the Indians to burn their wheat-fields, and would soon march with a large body of men for the upper country to drive all the Americans out of California. Mr. Larkin was in Santa Clara several times during the collection of these men by Castro, and in his capacity of U. S. Consul informed Castro and Alvarado of the rumors, represented the prejudicial effects

of such reports on the public mind and on their own reputations, and demanded information. Both Castro and Alvarado emphatically denied the report respecting the Indians, and disclaimed any intention of going to the Sacramento River for any purpose. As the consul was fully informed of the object in the collection of men at Santa Clara, he believed the assertions of Castro and Alvarado. Pio Pico was north of Santa Barbara, on his march to put down Castro, when he heard that the American flag had been hoisted over Upper California by Commodore Sloat, and he turned back. About this time he wrote a letter to the American Consul which is published in the *Annals of San Francisco.* Pico objected to the possession of so much land on the Sacramento River by foreigners, but Castro wished them to have it.

The Mariposa ranch came into the possession of Fremont accidentally. Previous to the gold discovery he had requested Mr. Larkin to buy a ranch for him, but had provided no money, and had selected no land. Some time after this, and before the gold was discovered, Governor Alvarado offered the Mariposa ranch to Larkin for $3,000. The latter made the purchase, really for Fremont, but intending, if the latter objected, to keep the place for himself. When they met, Fremont agreed to take the ranch, but expressed a slight regret that Larkin had not bought a ranch *on the coast.—California Chronicle, January* 28, 1856.

THE FIRST GOLD MINING IN CALIFORNIA

ALTHOUGH the fact has heretofore been published, it is not generally known, that gold placers were worked in California long before the discovery at Sutter's mill in 1848. Documentary evidence of this interesting fact has just been published by the *Alta*, in the shape of a letter addressed by Abel Stearns, of Los Angeles, to Louis R.

Lull, Secretary of the Society of Pioneers. Mr. Stearns, who came to California, from Mexico, in 1829—nearly forty years ago—says that on the 22d of November, 1842, he sent by Alfred Robinson (who returned from California to the States by way of Mexico), twenty ounces California weight (eighteen and three-fourths ounces Mint weight) of placer gold, to be forwarded by him to the United States Mint at Philadelphia. The Mint assay was returned August 6, 1843. The gold was taken from placers first discovered in March, 1842, by Francisco Lopez, a native Californian, at San Francisquito, about thirty-five miles northwest from Los Angeles. Lopez, while resting in the shade with some companions during a hunt for stray horses, dug up some wild onions with his sheath-knife, and in the dirt discovered a piece of gold. Searching further he found more pieces, and on returning to town announced his discovery. A few persons, mostly Sonorians, who were accustomed to placer mining in Mexico, worked in the San Francisquito placer from this time until the latter part of 1846, when the war with the United States disturbed the country, taking out $6,000 to $8,000 per annum. The United States Mint Certificate, for the assay made for Mr. Stearns in 1843, is now in the archives of the Society of Pioneers. There have been reports that gold was dug in this State as early as 1834, but these arose from the fact that shipments were made of bullion received from New Mexico and Sonora. The existence of gold in California had doubtless been known in a limited way, but the first known working of a mine is that recorded above.—*S. F. Bulletin, May*, 1868.

APOSTROPHE TO WATER.

SOME time since we alluded to the famous apostrophe to water which John B. Gough, the eloquent lecturer on temperance, has repeated to electrified thousands in America and England. Mr. Gough never informed an audience that he was not the author of the apostrophe, and for years he has enjoyed the undisputed credit of it. We stated that it originated with Paul Denton, an itinerant of the Methodist Church in Texas, and that it was delivered at a barbecue which Denton had prepared, and to which he invited the Rangers. It has been years since we read the incident, and we are delighted to find it in an exchange, credited to a Texas paper. We feel sure our readers will be equally delighted with its perusal:—

The smoking viands were arranged on the tables by scores of slaves, and the throng prepared to commence the sumptuous meal, when a voice pealed from the pulpit, loud as the blast of a trumpet in battle, "Stay, ladies and gentlemen, till the giver of the barbecue asks God's blessing!" Every heart thrilled, every eye was directed to the speaker, and a whisperless silence ensued, for all alike were struck by his remarkable appearance. He was almost a giant in stature, though scarcely thirty years of age. His hair, dark as the raven's wing, flowed down his immense shoulders in masses of natural ringlets; his eyes, black as midnight, beamed like stars over a face pale as Parian marble—calm, passionless, spiritual, and wearing a singular, indefinable expression. The heterogeneous crowd—hunters, gamblers, and homicides—gazed in mute astonishment. The minister prayed, but it sounded like no other prayer ever addressed to the Throne of Grace. It was the cry of a naked soul, and that soul a beggar for the bread and the water of heavenly life.

He ceased, and not till then did I become conscious of weeping. I looked around through my tears and saw hundreds of faces wet as with rain.

"Now, my friends," said the missionary, "partake of God's gifts at the table, and then come and sit down and listen to his Gospel."

It would be impossible to describe the sweet tone of kindness in which these simple words were uttered, that made him on the instant five hundred friends. One heart, however, in the assembly, was maddened at the evidence of the preacher's wonderful power.

Colonel Watt Foreman exclaimed, in a sneering voice, "Mr. Denton, your reverence has lied. You promised us not only a good barbecue, but better liquor. Where is the liquor?"

"There!" answered the missionary, in tones of thunder, and pointing his motionless finger at the matchless Double Spring gushing up in two strong columns, with a shout like a shout of joy, from the bosom of the earth. "There!" he repeated, with a look terrible as lightning, while his enemy actually trembled at his feet. "There is the liquor which God, the Eternal, brews for his children—not in the simmering still, over smoky fires, choked with poisonous gases and surrounded with the stench of sickening odors and rank corruption, doth your Father in Heaven prepare the precious essence of life, the pure cold water—but in the green glade and grassy dell, where the red deer wanders and the child loves to play, there God himself brews it; and down—down in the deep valleys, where the fountains murmur and the rills sing; and high on the tall mountain-tops, where the naked granite glitters like gold in the sun—where the storm cloud broods and the thunder tones crash; and away far out on the wide, wide sea, where the hurricane howls music, and the big waves roar the chorus, 'sweeping the march of God,' there he brews it, that beverage of life—health-giving water. And everywhere it is a thing of beauty—gleaming in the dew-drop—singing in the summer rain—shining in the ice-gem, till the trees all seem turned to living jewels—spreading a golden veil over the setting sun, or a white gauze around the midnight moon—sporting in the cataract—sleeping in the glacier—dancing in the hail shower—folding its bright snow curtains softly about the wintry world—

weaving the many-colored iris, that seraph's zone of the sky, whose roof is the sunbeams of heaven, all checked over with celestial flowers by the mystic hand of refraction. Still always it is beautiful—that blessed life-water. No poison bubbles on its brink—its foam brings not madness—no blood stains its liquid glass—pale widows and starving orphans weep not burning tears in its clear depths—no drunkard's shrieking ghost from the grave curses it in words of eternal despair! Speak out, my friends; would you exchange it for the demon's drink—alcohol?"

A shout like the roar of a tempest answered, "No!"—*Pittsburg Dispatch.*

THE FINAL FATE OF THE UNIVERSE.

IF two bodies were placed in space, without any force acting upon either of them other than their own gravity, they would immediately start toward each other, and would rush together. The sun and planets, which constitute the stellar system, to which our solar system belongs, are prevented from rushing together into one mass by their revolutions about each other. The revolutions of the planets around our sun, and of the satellites about their primaries, have been ascertained, with that wonderful precision which is the just pride of astronomical science, and astronomers are now engaged in the sublime problem of unraveling the revolutions of the countless suns that make up our stellar system. Already the cluster of the Pleiades is indicated as the proximate locality of the center around which our sun, with his attendant planets, is sweeping his vast orbit; and it is suggested that this is probably the common center of the orbits of all the suns of our stellar system.

If the force of gravity extends across the inconceivable spaces which separate the several stellar systems of the universe, these systems must rush together, unless they are held apart by revolutions around each other.

If light were an emanation, as held by Newton, the spaces between the solid bodies of the universe might be absolutely empty; and, in that case, the revolutions of the bodies around each other might go on forever. On the other hand, if light is a vibration in a subtle fluid, this fluid must obstruct the motions of bodies revolving in it, and they must finally come together in one mass. The experiment, so ingeniously devised by Arago, and carried out with such honorable regard for the fame of its designer by Messrs. Foucault, Fizeau, and Breguet, to determine whether there is a difference in the velocity of light in its passage through air and water, has demonstrated that light is a vibration. It follows from this that, as far as light extends, space is filled with a material fluid, which resists the motions of bodies revolving in it, and bodies within this space must gradually wind their way inward, and ultimately come together into one mass.

The moon must be drawing very slowly nearer and nearer to the earth, and the two bodies, in the far distant future, will come together. The solid crust of the earth will be broken up by the shock, an immense quantity of heat will be generated by the destruction of the moon's motion, and the two bodies will fuse together into one molten globe. As the new and enlarged earth is cooled upon its surface, a second series of geological deposits will be constituted, accompanied, perhaps, by strange and inconceivable forms of animal and vegetable life.

At the same time, the earth is winding its way inward toward the sun, and must ultimately fall, an inconsiderable pebble, into that vast, glowing mass. The same fate awaits all the planets, and our solar system must one day be but a single globe. When this globe is cooled to the right temperature, it may be covered with a multitude of inhabitants, and astronomers may arise who will watch its revolutions among the associated suns of our stellar system. If their knowledge and intellect are equal to the science of our astronomers, they will foresee the ultimate coming together of all these suns into one common globe. And not this only, for they will predict the final coming together of all

the stellar systems of the visible universe into one mass of matter.

When this mass is first collected, it will be intensely hot, from the destruction of motion in the several suns and systems of suns as they come together. The heat will be radiated outward into the universe, and the one mass of matter will be gradually cooled. During the cooling, there will be the same play and mutual interchange of heat, electricity, light, magnetism, and other imponderable forces that there is now upon this earth. As the cooling proceeds, the action of these forces will diminish; when 977° is reached, light will cease, and darkness will fill the universe. As each vibration of heat leaves the surface of the material mass, it will expand outward, at the rate of 192,000 miles per second, in all directions, in the form of a swiftly swelling, hollow globe. When the temperature of absolute cold is reached (493.2°), the last vibration of heat will leave the mass of matter, and will expand outward through infinity of space and time.

Supposing, however, the ethereal fluid which fills the visible portion of the universe is limited in extent, so that the last vibration of heat will reach its boundaries, and cease, what then becomes of the force of the universe, and of the doctrine of the conservation of force?—*Scientific American.*

THE EYE OF THE COMMANDER.

A New Year's Legend of Spanish California.

THE year of Grace 1797 passed away on the coast of California in a southwesterly gale. The little bay of San Carlos, albeit sheltered by the headlands of the blessed Trinity, was rough and turbulent; its foam clung quivering to the seaward wall of the Mission garden; the air was filled with flying sand and spume, and as the Señor Comandante, Hermenegildo Salvatierra, looked from the deep embrasured window of the Presidio guard-room, he felt the salt breath

of the distant sea buffet a color into his smoke-dried cheeks. The Commander, I have said, was gazing thoughtfully from the window of the guard-room. He may have been reviewing the events of the year now about to pass away. But, like the garrison at the Presidio, there was little to review; the year, like its predecessor, had been uneventful —the days had slipped by in a delicious monotony of simple duties—unbroken by incident or interruption. The regularly recurring feasts and Saints' days, the half-yearly courier from San Diego, the rare transport ship, and rarer foreign vessel, were the mere details of his patriarchal life. If there was no achievement, there was certainly no failure. Abundant harvests and patient industry amply supplied the wants of Presidio and Mission. Isolated from the family of nations, the wars which shook the world concerned them not so much as the last earthquake; the struggle that emancipated their sister colonies on the other side of the continent to them had no suggestiveness. In short, it was that glorious Indian summer of Californian history, around which so much poetical haze still lingers—that bland, indolent autumn of Spanish rule, so soon to be followed by the wintry storms of Mexican independence, and the reviving spring of American conquest.

The Commander turned from the window, and walked toward the fire that burned brightly on the deep oven-like hearth. A pile of copy-books, the work of the Presidio school, lay on the table. As he turned over the leaves, with a paternal interest, and surveyed the fair, round Scripture text—the first pious pot-hooks of the pupils of San Carlos—an audible commentary fell from his lips:—"'Abimelech took her from Abraham'—ah, little one, excellent!—'Jacob sent to see his brother'—body of Christ! that up-stroke of thine, Pachita, is marvelous; the Governor shall see it!" A film of honest pride dimmed the Commander's left eye—the right, alas! twenty years before had been sealed by an Indian arrow. He rubbed it softly with the sleeve of his leather jacket, and continued:—"'The Ishmaelites having arrived'—"

He stopped, for there was a step in the court-yard, a foot

upon the threshold, and a stranger entered. With the instinct of an old soldier, the Commander, after one glance at the intruder, turned quickly toward the wall, where his trusty Toledo hung, or should have been hanging. But it was not there; and, as the Commander recalled that the last time he had seen that weapon it was being ridden up and down the gallery by Pepito, the infant son of Bautista, the tortilla maker, he blushed, and then contented himself with frowning upon the intruder.

But the stranger's air, though irreverent, was decidedly peaceful. He was unarmed, and wore the ordinary cape of tarpaulin and sea-boots of a mariner. Except a villainous smell of cod-fish, there was little about him that was peculiar.

His name, as he informed the Commander, in Spanish, that was more fluent than elegant or precise—his name was Peleg Scudder He was master of the schooner *General Court*, of the port of Salem, in Massachusetts, on a trading voyage to the South Seas, but now driven by stress of weather into the bay of San Carlos. He begged permission to ride out the gale under the headlands of the blessed Trinity, and no more. Water he did not need, having taken in a supply at Bodega. He knew the strict surveillance of the Spanish port regulations in regard to foreign vessels, and would do nothing against the severe discipline and good order of the settlement. There was a slight tinge of sarcasm in his tone, as he glanced toward the desolate parade ground of the Presidio and the open unguarded gate. The fact was, that the sentry, Felipe Gomez, had discreetly retired to shelter at the beginning of the storm, and was then sound asleep in the corridor.

The Commander hesitated. The port regulations were severe, but he was accustomed to exercise individual authority, and beyond an old order, issued ten years before, regarding the American ship *Columbia*, there was no precedent to guide him. The storm was severe, and a sentiment of humanity urged him to grant the stranger's request. It is but just to the Commander to say that his inability to enforce a refusal did not weigh with his decision. He would

have denied, with equal disregard of consequences, that right to a seventy-four gun ship which he now yielded so gracefully to this Yankee trading schooner. He stipulated only that there should be no communication between the ship and shore. "For yourself, Señor Captain," he continued, "accept my hospitality. The fort is yours as long as you shall grace it with your distinguished presence;" and, with old-fashioned courtesy, he made the semblance of withdrawing from the guard-room.

Master Peleg Scudder smiled as he thought of the half-dismantled fort, the two moldy brass cannon, cast in Manila a century previous, and the shiftless garrison. A wild thought of accepting the Commander's offer literally—conceived in the reckless spirit of a man who never let slip an offer for trade—for a moment filled his brain, but a timely reflection of the commercial unimportance of the transaction checked him. He only took a capacious quid of tobacco, as the Commander gravely drew a settle before the fire, and, in honor of his guest untied the black silk handkerchief that bound his grizzled brows.

What passed between Salvatierra and his guest that night, it becomes me not, as a grave chronicler of the salient points of history, to relate. I have said that Master Peleg Scudder was a fluent talker, and under the influence of divers strong waters furnished by his host he became still more loquacious. And think of a man with a twenty years' budget of gossip! The Commander learned for the first time how Great Britain lost her colonies; of the French Revolution; of the Great Napoleon, whose achievements perhaps Peleg colored more highly than the Commander's superiors would have liked. And when Peleg turned questioner, the Commander was at his mercy. He gradually made himself master of the gossip of the Mission and Presidio, the "small beer" chronicles of that pastoral age, the conversion of the heathen, the Presidio schools, and even asked the Commander how he had lost his eye! It is said that at this point of the conversation Master Peleg produced from about his person divers small trinkets, kick-shaws and new-fangled trifles, and even forced some of them upon his host. It is

further alleged that under the malign influence of Peleg, and several glasses of *aguadiente*, the Commander lost somewhat of his decorum and behaved in a manner unseemly for one in his position, reciting high-flown Spanish poetry, and even piping in a thin, high voice, divers madrigals and heathen canzonets of an amorous complexion—chiefly in regard to a "little one" who was his, the Commander's "soul!" These allegations, perhaps unworthy the notice of a serious chronicler, should be received with great caution, and are introduced here as simple hearsay. That the Commander, however, took a handkerchief and attempted to show his guest the mysteries of the *sembi-cuacua*, capering in an agile but indecorous manner about the apartment, I utterly deny. Enough for the purposes of this narrative, that at midnight Peleg assisted his host to bed with many protestations of undying friendship, and then as the gale had abated, took his leave of the Presidio and hurried aboard the *General Court*. When the day broke the ship was gone.

I know not if Peleg kept his word with his host. It is said that the holy Fathers at the Mission that night heard a loud chanting in the plaza, as of the heathens singing psalms through their noses, that for many days after, an odor of salt codfish prevailed in the settlement, that a dozen hard nutmegs which were unfit for spice or seed, were found in the possession of the wife of the baker, and that several bushels of shoe-pegs which bore a pleasing resemblance to oats, but were quite inadequate to the purposes of provender, were discovered in the stable of the blacksmith. But when the reader reflects upon the sacredness of a Yankee trader's word, the stringent discipline of the Spanish port regulations, and the proverbial indisposition of my countrymen to impose upon the confidence of a simple people, he will at once reject this part of the story.

A roll of drums, ushering in the year 1798, awoke the Commander. The sun was shining brightly and the storm

had ceased. He sat up in bed, and through the force of habit rubbed his left eye. As the remembrance of the previous night came back to him, he jumped from his couch and ran to the window. There was no ship in the bay. A sudden thought seemed to strike the Commander, and he rubbed both of his eyes. Not content with this he consulted the metallic mirror which hung beside his crucifix. There was no mistake. The Commander had a visible second eye—a right one—as good, save for the purposes of vision, as the left.

Whatever might have been the true secret of this transformation, but one opinion prevailed at San Carlos. It was one of those rare miracles vouchsafed a pious Catholic community as an evidence to the heathen, through the intercession of the blessed San Carlos himself. That their beloved Commander, the temporal defender of the Faith, should be the recipient of this miraculous manifestation, was most fit and seemly. The Commander himself was reticent; he could not tell a falsehood—he dare not tell the truth. After all, if the good folk of San Carlos believed that the powers of his right eye were actually restored, was it wise and discreet for him to undeceive them? For the first time in his life, the Commander thought of policy; for the first time, he quoted that text which has been the lure of so many well-meaning but easy Christians, of being "all things to all men." Infelix Hermenegildo Salvatierra! Through thy foolish pride crept the arch-enemy into thy soul; through thy weakness fell the fair fortunes of San Carlos!

For by degrees an ominous whisper crept through the little settlement. The right eye of the Commander, although miraculous, seemed to exercise a baleful effect upon the beholder. No one could look at it without winking. It was cold, hard, relentless and unflinching. More than that, it seemed to be endowed with a dreadful prescience—a faculty of seeing through and into the inarticulate thoughts of those it looked upon. The soldiers of the garrison obeyed the eye rather than the voice of their Commander, and answered his glance rather than his lips in questioning. The servants could not evade the ever-watch-

ful, but cold attention that seemed to pursue them. The children of the Presidio school smirched their copy-books under the awful supervision, and poor Pachita, the prize pupil, failed utterly in that marvelous up-stroke when her patron stood beside her. Gradually distrust, suspicion, self-accusation, and timidity, took the place of trust, confidence, and security throughout San Carlos. Wherever the right eye of the Commander fell, a shadow fell with it.

Nor was Salvatierra entirely free from the baleful influence of his miraculous acquisition. Unconscious of its effect upon others, he only saw in their actions evidence of certain things that the crafty Peleg had hinted on that eventful New Year's Eve. His most trusty retainers stammered, blushed, and faltered before him. Self-accusations, confessions of minor faults and delinquencies, or extravagant excuses and apologies, met his mildest inquiries. The very children that he loved—his pet pupil, Pachita—seemed to be conscious of some hidden sin. The result of this constant irritation showed itself more plainly. For the first half year, the Commander's voice and eye were at variance. He was still kind, tender, and thoughtful in speech. Gradually, however, his voice took upon itself the hardness of his glance, and its skeptical, impassive quality, and as the year again neared its close, it was plain that the Commander had fitted himself to the eye, and not the eye to the Commander.

It may be surmised that these changes did not escape the watchful solicitude of the Fathers. Indeed, the few who were first to ascribe the right eye of Salvatierra to miraculous origin, and the special grace of the blessed San Carlos, now talked openly of witchcraft and the agency of Luzbel, the evil one. It would have fared ill with Hermenegildo Salvatierra had he been aught but Commander, or amenable to local authority. But the reverend Father, Friar Manuel de Cortes, had no power over the political executive, and all attempts at spiritual advice failed signally. He retired baffled and confused from his first interview with the Commander, who seemed now to take a grim satisfaction in the fateful power of his glance. The holy Father

contradicted himself, exposed the fallacies of his own arguments, and even, it is asserted, committed himself to several undoubted heresies. When the Commander stood up at mass, if the officiating priest caught that skeptical and searching eye, the service was inevitably ruined. Even the power of the Holy Church seemed to be lost, and the last hold upon the affections of the people and the good order of the settlement departed from San Carlos.

The long dry summer passed. As each fierce day burned itself out in little whiffs of pearl-gray smoke on the mountain summits, the low hills that surrounded the white walls of the Presidio grew more and more to resemble in hue the leathern jacket of the Commander, and nature herself seemed to have borrowed his dry hard glare. The earth was cracked and seamed with drought; a blight had fallen upon the orchards and vineyards, and the rain, long delayed and ardently prayed for, came not. The sky was as tearless as the right eye of the Commander. Murmurs of discontent, insubordination and plotting among the Indians reached his ears; he only set his teeth the more firmly, tightened the knot of his black silk headkerchief, and looked up his Toledo.

The last day of the year 1798 found the Commander sitting, at the hour of evening prayers, alone in the guard-room. He no longer attended the services of the Holy Church, but crept away at such times to some solitary spot, where he spent the interval in silent meditation. The fire-light played upon the low beams and rafters, but left the bowed figure of Salvatierra in darkness. Sitting thus, he felt a small hand touch his arm, and looking down saw the figure of Pachita, his little Indian pupil, at his knee. "Ah, littlest of all," said the Commander, with something of his old tenderness, lingering with wonderful sweetness over the endearing diminutives of his native speech—"sweet one, what doest thou here? Art thou not afraid of him, whom every one shuns and fears?"

"No," said the little Indian, readily, "not in the dark. I hear your voice—the old voice; I feel your touch—the old touch; but I see not your eye, Señor Comandante.

That I only fear—and that, oh, Señor! Oh, my father," said the child, lifting her little arms toward his—"that I know is not thine own."

The Commander shuddered and turned away. Then, recovering himself, he kissed Pachita gravely on the forehead and bade her retire. A few hours later, when silence had fallen upon the Presidio, he sought his own couch and slept peacefully.

At about the middle watch of the night a dusky figure crept through the low embrasure of the Commander's apartment. Other figures were flitting through the parade-ground, which the Commander might have seen had he not slept so quietly. The intruder stepped noiselessly to the couch and listened to the sleeper's deep-drawn inspiration. Some thing glittered in the fire-light as the savage lifted his arm; another moment and the sore perplexities of Hermenegildo Salvatierra would have been over, when suddenly the savage started and fell back in a paroxysm of terror. The Commander slept peacefully, but his right eye widely opened, fixed and unaltered, glared coldly on the would-be assassin. The man fell to the earth in a fit, and the noise awoke the sleeper.

To rise to his feet, grasp his sword, and deal blows thick and fast upon the mutinous savages who now thronged the room, was the work of a moment. Help opportunely arrived and the undisciplined Indians were speedily driven beyond the walls, but in the scuffle the Commander received a blow upon his right eye, and lifting his hand to that mysterious organ it was gone. Never again was it found, and never again, for bale or bliss, did it adorn the right orbit of the Commander.

With it passed away the spell that had fallen upon San Carlos. The rain returned to invigorate the languid soil, harmony was restored to priest and soldier, the green grass presently waved over the sere hill-sides, the children flocked again to the side of their martial preceptor, a *Te Deum* was sung in the Mission church, and pastoral content once more smiled upon the gentle valleys of San Carlos. And far southward crept the *General Court*, with its master, Peleg

Scudder, trafficking in beads and peltries with the Indians, and offering glass eyes, wooden legs, and other Boston notions, to the chiefs.—*Frank Bret Harte, in San Francisco Bulletin, January* 4, 1867.

THE CHANDOS PICTURE.

The bell far off beats midnight; in the dark
The sounds have lost their way and wander slowly;
Through the dead air, beside me, things cry "Hark!"
And whisper words unholy.

A hand as soft as velvet taps my cheek;
These gusts are from the wings of unseen vampires.
How the thick dust on that last tome doth speak
Its themes—dead kings and empires!

This is the chamber—ruined, waste, forlorn—
Shred of its old-time gildings, paint, and splendor;
And is there none its dim decay to mourn,
In mystic strains and tender?

Why waits no harper gay, with elfin hand
On tuneless chords to harshly hail the stranger—
Who treads the brink of an enchanted strand
In mist and midnight danger?

I watch, and am not weary; all night long
The stars look shimmering through the yawning casement;
And the low ring of their unvarying song
I hear without amazement.

How the hours pass!—with that low murmur blent,
That is a part of time, yet thrills us only
When all besides is silent and close pent,
The heart is chilled and lonely.

I watch, and am not weary:—I have heard
Light steps and whispers pass me, all undaunted;
Have seen pale specters glide, where nothing stirred—
Because the place is haunted.

And wherefore watch I fearless? Wherefore come
Those things with windy garments hovering round me?
Whence are the tongues, the tones, the stifled hum,
That welcomed and have bound me?

Lo! on the wall, in mist and gloom high reared,
A luminous face adorns the structure hoary;
Light-bearded, hazel-eyed, and auburn-haired,
And bright with a strange glory.

'Tis but the semblance of a long dead one—
A light that shines, and is not—clouds are o'er it;
Yet, in the realms of thought, it beams a sun—
And stars grow pale before it.

There, tend the tones; through that wan atmosphere
Glide the faint specters with a stately motion;
Slowly as cloudy ships to sunset steer
Along the airy ocean.

Shades of the great, but unremembered dead,
Mourn there, and moaning, ever restless, wander;
For in the presence of that pictured head,
Their waning shapes grow grander.

And here watch I, beneath those eyes sublime,
A listing to the soft, resounding numbers,
That float like wind along the waves of time,
And cheat me of my slumbers.

But who shall calm the restless sprites that rove
In the mute presence of that painted poet?
In vain their triumph in old wars or love;
No future times shall know it.

For, "oh!" they cry, "his song has named us not!
He stretched no hand to lift the pall flung o'er us."
And still they moan and shriek—"forgot! forgot!"
In faint and shivering chorus.

Mightiest of all—my master! Dare but I
Touch the shrunk chords thy hand divine hath shaken,
How would the heroes of the days gone by
Throng round me and awaken!

Oh! many a heart the worthiest—many a heart—
Cold now—but once an angel's warm, bright dwelling
Waits but the minstrel's wizard hand to start
With life immortal swelling!

And thou, so missed, where art thou? On what sphere
Of nightless glory hast thou built thine altar?
What shining hosts bow down thy song to hear—
Thy heart, the harp, and psalter?

Thy dust is mingled with thy native sod—
Exhaled like dew thy soul that ranged unbounded;
But who shall dare to tread where Shakespeare trod
Or strike the harp he sounded?

EDWARD POLLOCK.

REMARKABLE MASONIC INCIDENT.

THE first masonic funeral that ever took place in California occurred in the year 1849, and was performed over the body of a brother found drowned in the Bay of San Francisco. An account of the ceremony states that on the body of the deceased was found a silver mark of Mason, upon which was engraved the initials of his name. A little further investigation revealed to the beholders the most singular exhibition of masonic emblems that were ever drawn by the ingenuity of man upon the human skin. There is nothing in the history or traditions of Freemasonry equal to it. Beautifully dotted on his left arm, in red or blue ink, which time could not efface, appeared all the emblems of the Entered Apprentice. There were the Holy Bible, the square, and the compass, the twenty-four-inch gauge, and the common gavel. There were also the Mosaic pavement representation of the ground-floor of King Solomon's temple, the identical tessel which surrounds it, and the blazing star in the center. On his right arm, and artificially executed in the same indelible liquids, were the

emblems pertaining to the fellow craft, viz.: the plumb, the square, and the level. There were also the five columns representing the five orders of architecture — the Tuscan, Doric, Ionic, Corinthian, and Composite.

In removing the garments from his body, the trowel presented itself, with all the working tools of operative masonry, besides all the emblems peculiar to the degree of a master mason. Conspicuously on his breast were the lights of masonry. Over his heart was the pot of incense. On the other parts of his body were the bee-hive, the book of constitutions, guarded by the Tyler's sword; the sword pointing to a naked heart; all-seeing Eye; the anchor and ark, the holy-glass, the scythe, the forty-seventh problem of Euclid; the sun, moon, stars, and comet, the three steps, emblematical of youth, manhood, and age. Admirably executed was the weeping virgin, reclining on a broken column, upon which lay the book of constitutions. In her left hand she held the pot of incense, the emblem of a pure heart; and in her uplifted hand a sprig of acacia, the emblem of the immortality of the soul. Immediately beneath her stood winged Time, with his scythe by his side, which cuts the brittle thread of life, and the hour-glass at his feet, which is ever reminding us that our lives are withering away. The withered and attenuated fingers of the destroyer were delicately placed amid the long and gracefully flowing ringlets of the disconsolate mourner. Thus were the striking emblems of mortality and immortality beautifully blended in one pictorial representation. It was a spectacle such as masons never saw before, and in all probability such as the fraternity will never witness again. The brother's name was never known.—*Sacramento State Capital Reporter, May* 27, 1868.

NATIONAL MEN OF AMERICA.

ANDREW JACKSON.

IN personal appearance he was tall, spare, slender and muscular. There was not an ounce of surplus flesh upon his whole body. He possessed more than ordinary physical strength, but it consisted more in activity and endurance, and in prompt, resolute, and fearless energy, than in what we are accustomed to call brute strength. It was not the strength of the giant, but that of a high-souled, fearless hero, who would confront a legion of giants if necessary to defend the weak or to succor the oppressed. He had a lofty, commanding head, and a highly intellectual forehead. But his whole soul was visible in his dark-gray eye. I never saw such an eye in any other human head. It was kind and gentle, resolute and intellectual. It was as tender at times as the eye of a woman—as piercing at times as the eye of an eagle—and there were times in Andrew Jackson's life, when that dark gray eye was as terrible as the eye of the roused lion. No danger, moral or physical, could make it quail. Then it was a thoroughly honest eye. It loved and respected truth and justice, and hated and despised fraud and falsehood, and every kind of dishonorable action. Andrew Jackson was born a hero, and every man who approached him had to recognize him as such, that is, as a man formed by nature to be the leader of his fellow-men, in any great human emergency.

WEBSTER.

Daniel Webster was a man of entirely different type. He was not so tall as Andrew Jackson, but slow and thoughtful, rather than active, and more resolute and fearless. In fact, the whole man seemed to have been cast in a solid, massive, powerful mold. Every thing about him, even to his manner of walking and talking, indicated power, positive power, solid power, power that would neither seek nor

shun exertion, but which, if once raised into full exertion, might become almost irresistible. But how shall I describe his head? I have never seen such another head upon a human body—I never expect to see such another human head again. In size, weight, magnitude, and capacity, it was absolute, stupendous, and, though finely shaped, it would have appeared perfectly enormous had it not had a proportionably powerful body to support it. But the column seemed to have been made expressly to uphold the majestic capital. His forehead was in harmony with the head, large, broad, lofty, and massive. The huge brain had expanded and pressed it forward until it had overshadowed the other features of his face. His eyes were large, dark, and deep set, and filled with a strange, smoldering, intellectual light. There was a singular look in that dark, deep eye. It never seemed to look at your form or features, but at your soul. You felt when it turned upon you, that it was taking the gauge of your mind, and weighing your intellectual value as a unit in the sum of humanity. The other features of his face were well-formed, very regular, and intellectual, giving an air of composure and refinement to his dark and dignified countenance. But in my judgment, the grand characteristic of Daniel Webster was not activity or energy, but power, physical and intellectual. His moral attributes were not on a level with his other great qualities. His great defect was self-indulgence, and therefore it must be conceded that he had but little of the martyr or the true hero in his composition. But in transcendent, intellectual greatness, Daniel Webster, in my opinion, has had but few equals, either in ancient or modern times.

CLAY.

Henry Clay was a man of an entirely different type. He was a thorough Western man; tall and slender, with a frank, careless, genial, fearless manner. He had a large, manly head, and a lofty, intellectual forehead. He had fair hair, fair complexion, and blue eyes. His eye was bright, frank, open, intellectual, and fearless. It was an eminently prac-

tical eye. It just saw the world as it was, and understood it perfectly, and knew how to make the best of it on all occasions. The other features of his face were wanting in regularity, and might be called remarkably plain, but the glow of generous feeling and intelligence that overspread his whole countenance was unmistakable. And when animated in debate, that frank, open, manly countenance underwent a transfiguration that made it appear positively handsome—and the ladies, who ought to be the best of judges in such cases, esteemed Henry Clay at all times, the most captivating man of the age. But the principal charm about Henry Clay was his incomparable voice. That marvelous voice was capable of unlimited modulation, and of expressing with the highest possible perfection every passion and emotion of the soul. When he rose in his place in the Senate to make one of those inimitable speeches, which, for the time being, swept every thing before them, it was interesting to witness the effect of his voice and manner upon the audience. Before he had uttered a half a dozen sentences you would hear a rustling of silk dresses, as if a breeze of autumn wind had swept through the galleries, from the commotion and excitement among the ladies. And as he proceeded with his discourse this excitement would increase and communicate itself to the whole audience—Senate and all. The effect for the time-being was utterly irresistible, and therefore indescribable.—*Gen. James Shields.*

SELECTIONS FROM AN ADDRESS OF T. STARR KING, BEFORE THE SAN JOAQUIN VALLEY AGRICULTURAL SOCIETY, AT STOCKTON, SEPT., 1862.

EARLY four months ago I had the privilege of climbing to the top of Mount Diablo, which rises like an enchanted billow, from the plain. (From San Francisco we see only one mountain and one peak. Here you see two. Is this a sign that in Stockton you have had a double share of the

power of Satan to contend with?) How glorious the view was from the highest peak in May! Sweeps and slopes of green, such as no artist's colors at the East could imitate, the San Joaquin plains beneath, emerged from their flood, embroidered with flowers, and bursting into the promise which this week fulfills—the San Joaquin itself so dingy that it looked as though it flowed molten from Copperopolis —the sea showing its unruffled azure far-off between the cliffs of the Golden Gate; and on the east the snowy guards of all your opulence, the mighty bulwark of the Sierra, visible for two hundred and fifty miles—its lower slopes as rich in gold as their crests at evening with the gold of sunset; its further slopes veined with silver only less white and pure than those great crests at noon!

One sees in a moment from that elevation, in early May, what a bounteous and wonderful district it is which your Society represents. But suppose that some one with a powerful telescope could be lifted to that eminence in early September, and make his first acquaintance then with your district and the State! What would his impression be? Would he not suppose that he was lifted over a boundless desert? Would he not believe that the six rainless months were a virtual curse of Providence sealed into the sallow landscape? Would he not imagine that if any inhabitants dwelt there, they were fed either by manna or by bacon from the East? Would he not behold, in the wide-spread desolation, and in the hot, thick air, the fulfillment of the doom of death upon Nature—"Dust thou art, and unto dust thou shalt return?"

What would our visitor on this height be likely to say, if told that the landscape, so brown and lugubrious beneath him, inclosed an agricultural opulence of which the figures seem almost miraculous; that its grain crops average double those of the Eastern States; that fruits were then ripening all around him in surpassing luxuriance and beauty; and that the growth of the grape in that blasted landscape, during the last three years, surpasses any thing known in the most favored districts of the Rhine lands—France or Italy? What would he say, if his telescope should bring

within vision all that the District Fairs and the State Fair will collect during this month to attest the strength and richness of our soil? He would see, to his amazement, that the State which seems given over, in a general view, to the "abomination of desolation," is really the field of two immense "horns of plenty,"—one widening downward from the pinnacle of Mt. Shasta, the other widening upward from the mountains of San Bernardino, crammed with the riches of granaries and orchards, and overflowing all upon the metropolis in the center of the coast line by the Golden Gate! He would see that we are called upon by our copious blessings to be the most grateful and the most patriotic people on the globe.

Let me say, first, that the farmers here are to be congratulated on the intrinsic nobleness of their office and labor. All honest labor is noble. But in respect to physical toil, it is impossible to conquer the instinct of the race, which assigns greater dignity to the skillful industry expended directly upon mother earth.

If an aroma could always attend gold, telling you what ways it was gained, whether it was inherited or won by enterprise and skill,—and if earned, whether in ways useful or hurtful to the higher interests of society, there would be no danger of a mean worship of money. If a man's silver and gold told the story at once whether he earned it in making sugar or turning it into liquor—in raising wheat or in speculating on it—in weaving honest cloth or in weaving shoddy—in putting soles to shoes for soldiers or sham ones which prove that the makers hadn't any soul at all—in spinning cotton or in serving as one of the crowd of unnecessary agents in its distribution, money would carry its own judgment with it.

In any such system, the farmer need not fear to let the aroma of his money expend itself far and wide. It would sprinkle the wholesomeness of winds, the perfume of blossoms, the strengthening smell of the soil, the fragrance of noblest uses.

The farmer that pays his debts can't get rich dishonestly in the sight of heaven. There can't be too much wheat, too

many noble cattle, too much wool, an excess of excellent peaches and pears, too many pumpkins, or even too great a crowd of cabbages, if they are not eaten so immoderately as to come to a head again on human shoulders.

The two noblest classes of labor are the extremes—those expended on the material soil, and upon the mental and spiritual regions—those that improve the earth and that make humanity more fertile—the men who give us beets and grapes, and the men who give us ideas; the productive thinkers who show the fields can double their products without waste, and those who improve the capacity of the human mind and hand; the men who labor wisely for the fulfillment of the world's prayer, "Give us this day our daily bread," and the men who, by their genius and service, prove to us the immense significance of that other passage of instruction, "Man shall not live by bread alone, but by every word that proceedeth out of the mouth of God."

The land is the noblest of the gifts of God to humanity. A full treatise on agriculture—its annals and vicissitudes—would be a history of human society from Eden to the staking out of the last "claim" in Iowa or Oregon. The first step from the nomadic state upward toward stable civilization is into the feeling of personal possession of the soil. The fence is the first rude boundary between savagism and civilization.

It requires 800 acres of land, we are told, to supply a hunter as much food as half an acre will furnish under cultivation. And on the 800 acre system of supply, society is impossible; education is impossible; trades and arts are out of the question; combinations of power and interchange of products and help are unattainable. Just in proportion as the land is better tilled, and a smaller quantity of it is made to yield rich returns, the progress of the race is aided, and becomes manifest.

In dealing with the land man is called to be a co-worker with the infinite mind. This is the foundation of the nobleness of the farmer's office.

The air is given to us. We can not alter its constitution, or change its currents. The sea is not placed under our

dominion. We can not freshen it, or increase its saltness; we can not level or raise its billows. The rain is ordained for each latitude, and we can not hasten or vary the bounty of the clouds. Minerals are provided in a definite, unalterable measure by the creative force. But the soil we can make our own. We can increase and renew its richness. God does not make it to be a fixed or self-perpetuating blessing like the atmosphere and the ocean. It is a trust. So much He will do for it; but a very great deal is left for us to be faithful in. In the management of the soil, the Creator takes us into partnership. And on our fidelity, within the bounds of our trust, the progress of success depends.

The greatness of the trust is seen in this—that agriculture requires the greatest amount and variety of knowledge, and is everywhere latent in its development. We are only now entering upon the study of it. Nation after nation has withered and shriveled because it could not manage its land—because it had not science enough, vigor enough, virtue enough to organize the State so that the soil could be thoroughly tilled and refreshed. As soon as the land begins to yield regularly decreasing stores, so that small farms are absorbed into larger ones, and poverty creeps toward the farmer's hearth, there is radical evil in the State. Its prosperity is not rightly based. Its roots are feeble. It has begun to die. It is not able to sustain the tremendous partnership with Providence in making the soil creative.

In fact, we shall not reach the right point for appreciating the eminence of agriculture as a duty, a profession, and a trust, until we see that the earth is not yet finished. The Creator has left part of the fashioning to man, or rather waits work through man in perfecting it. The air comes up to the divine idea. The sea also answers to the majesty of God's first conception of it. The clouds correspond in their charms of form and glory of color to the archetypes of them in the divine imagination. The highest mountain tops, of splintered crag or dazzling snow, can not be improved any more than they can be altered by the power and wit of man.

But the earth does not yet fulfill the divine intention. It was not made for nettles, nor for the manzanita and chaparral. It was made for grain, for orchards, for the vine, for the comfort and luxuries of thrifty homes. It was made for these through the educated, organized, and moral labor of man. As plows run deeper, as irrigation is better understood and observed, as the capacity of different soils are comprehended, as types of vegetation are improved, as economy in the renewal of the vitality of the land is learned and practiced, the process of creation goes on; chaos subsides; the divine power and beauty appear in Nature.

In the first chapter of Genesis we read that God said, on the third day, "Let the waters under the heavens be gathered together into one place, and let the dry land appear; and it was so." But this third day's work is not yet over. It was only in the general and "in the rough" that the separation first took place. The best lands of the globe are still saturated and swampy. Man is to complete the fulfillment of that command. Drainage is the process that perfects it. Every acre of opulent bog and bounteous tule from which the coarse grasses are banished, and of which the snakes, frogs, and turtles are dispossessed, adds a new evidence of its fulfillment, and promotes the agent in it to the honor of being an implement of Providence in completing the task of creation.

And the dignity of agriculture is seen from this point of view, in the difficulty, also, that attends it. It is easy for a savage tribe sparsely scattered over a vast country, to scratch out some grain and common vegetables for a rude subsistence. But for an increasing civilized empire to develop the capacities of the land, so that it shall not be exhausted, but furnish ample food to enlarging generations, is a very difficult thing.

Nations always begin on the poorest soils of their domain. Many of them have never been able to manage the richer ones, which require clearing and drainage—and have died

because of that impotence. Some have brought these more fertile tracts under dominion for awhile, but have not been able to keep control of them, and have faded away to leave them to the reptile and miasma. The traveler by the seats of ancient empire, in parts of the valley of the Nile, on the rich lands of the Tigris, and the Euphrates, in Asia Minor, and in Syria, recalls the words of the Proverbs, "I went by the field of the slothful, and lo, it was all grown over with thorns, and nettles had covered the face thereof, and the stone wall thereof was broken down. Then I saw and considered it well; I looked upon it and received instruction."

Agriculture can be successful only where the people are moral; where they try diligently to learn the conditions of success in treating the land, and will receive it as a trust; and where, too, the State is so well and justly organized that near markets are afforded, so that the soil can receive back the aliments derived from it and essential to its fertility. As yet in history, the kingdoms have been very few that could take care of and develop their richest soils. They have known enough to be warriors and conquerors, to create literature, to gem magnificent temples and museums with trophies of art—but they have not known enough to be successful farmers, to insure the fir-tree for the thorn, and the myrtle-tree for the briar—to bring out and keep out the beauty on the land which Providence designed, and to base a permanent civilization on fields thoroughly plowed and refreshed, and on meadows and morasses dried, diked and guarded by watchful energy and thrift.

The eminence and dignity of the farmer's mission is seen not only when on this large scale we look at its relations to the creative Providence, and its difficulties, but also when on a large scale we look at the facts associated with it.

Virgil, the most graceful and elaborate of the old Latin poets, was requested—so we read—after the Roman civil wars had devastated Italy, to rekindle a devotion to agriculture by a poem on its offices and pleasures. He wrote the "Georgics," which all competent critics account superior in poetic merit to the Æneid and its story of battle and

heroism. This is a significant intimation of the poetic resources in the large contemplation of agriculture. Insight into the processes of nature reveals the very richest beauty, invested, too, with wonder.

Suppose that early in this year the whole world had bent itself in supplication to the Invisible Ruler—every man and woman from the arctic circle to the hot equator kneeling in the humility of conscious dependence, and lifting up from every zone the prayer—"Forsake us not, this year, Great Benefactor, but bless us in our helplessness, from the treasury of thy goodness." And suppose that after such a verbal petition the supply had come—that in every house had been found the water, and the stores, the bounties of vegetable and animal food, how surprising would the miraculous mercy have seemed?

But how much more surprising and inspiring is the real wonder, than such a shower upon a barren globe could be! With few prayers for it the great miracle has been wrought, and in the double way of beauty and bounty. For what is the display of the seasons? Is not the quickening of nature in the early months of the year as though God smiles upon the earth at the equator, and then the spreading wave of that benignity sweeps northward, rolling back the winter line, loosing the fetters of the frost, melting snows into fertilizing juices, pressing the cold clouds farther and farther back, and from the tropics to the edges of the Polar Sea, gladdening the soil till it utters in spreading verdure the visible green lyric of its joy? And the summer! Is it not the warm effluence of his breath that flows northward, and reveals the infinite goodness as it floats through the southern groves, and fills the fruits with sweetness, thickens the sap of the sugar fields, nourishes the rice plains, feeds the energies of the temperate clime, blesses the hardy orchards and the struggling wheat and corn, and dies amid the everlasting ice, after completing the circuit of its missions in clothing the northern woods with life? And then the many-hued pomp of harvest comes, when the more ruddy light and the gorgeous coloring repeat the joy of the Creator in the vast witnesses of His beneficence, and the

tired fields yield to the laborers their ample bounty, and seem to whisper, "Take, O children of men, and be grateful, until the course of the stupendous miracle is renewed!"

If we could see the wheat woven by fairy spinners, and the apples rounded, and painted, and packed with juice by elfin fingers—or if the sky were a vast granary or provision store, from which our needs were supplied in response to verbal prayers—who could help cherishing a constant undertone of wonder at the miraculous forces that encircle us? But consider how much more amazing is the *fact!* Consider how out of the same moisture the various flavors are compounded. The dew that drops in the tropics is transmitted into the orange liquor, and banana pulp, and sweet substance of the fig: the pomegranate stores itself with fragrance and savor from it; the various colors and qualities of the grape are drawn from it; and in the temperate orchards the rain is distilled in the dark arteries of trees into the peach and the pear, the apple and the plum. When a traveling trickster pours several different liquors from one bottle into cups among the spectators, it is called magical. But nature, not by deception, but actually, does pour for us one tasteless liquid into all the varieties of taste which the vegetable world supplies. If by a miracle kindred with that of Christ at Cana, a jar of water could be to-night converted within your houses into wholesome wine, would it be so admirable as the ways in which the vines make wine upon the hill-side out of the vapor and sunlight, at the bidding of God?

No wonder the ancient Roman poet wrote his most finished and inspiring verses in celebration of agriculture! The whole subject is fascinating and gorgeous poetry. And the marvel is that in modern times, when science has been unveiling the stores of enchantment and delight in the processes of vegetation, poetry has lagged so far behind, and has been unequal to the invitations of reality.

One of the most exquisite passages I am acquainted with in American literature is Longfellow's version in "The Song of Hiawatha," of the Indian legend of the gift of corn to the world. The red men believed that it was a mirac-

ulous benefaction from heaven. Three times there came from the skies to Hiawatha, the Indian saint and hero, a youth from the upper air,

"Dressed in garments green and yellow,
Sinking through the purple twilight,
Through the splendor of the sunset;
Plumes of green bent o'er his forehead,
And his hair was soft and golden."

This miraculous visitor, calling himself Mondamin, invited Hiawatha to wrestle with him, and charged him, if victorious, to strip the gay garments from his body, and bury him where the rain and sun might fall upon his grave. Three times they wrestled :—

"When the sun through heaven descending,
Like a red and burning cinder
From the hearth of the Great Spirit,
Fell into the western waters,
Came Mondamin for the trial,
For the strife with Hiawatha;
Came as silent as the dew comes,
From the empty air appearing,
Into empty air returning,
Taking shape when earth it touches,
But invisible to all men
In its coming and its going."

The third time Hiawatha was victorious. He stripped the gay garments from his celestial adversary, buried him as he was directed to do, and watched patiently by his grave,

"Till at length a small green feather
From the earth shot slowly upward,
Then another and another,
And before the Summer ended
Stood the maize in all its beauty,
With its shining robes about it,
And its long, soft, yellow tresses;
And in rapture Hiawatha

Cried aloud, 'It is Mondamin!
Yes, the friend of man, Mondamin!"
* * * * *
And still later when the Autumn
Changed the long green leaf to yellow,
And the soft and juicy kernels
Grew like wampum, hard and yellow,
Then the ripened ears he gathered,
Stripped the withered husks from off them,
As he once had stripped the wrestler,
And made known unto the people,
This new gift of the Great Spirit."

We are indebted for the charming conception thus charmingly wrought into measure to untutored Indians. I do not know in the poets of this country any fancy or creation equal to it, to embody the magic of modern chemistry involved in every harvest. The new Virgil will yet come who shall yet instruct and delight the race with the poetry of agriculture, and make the farmer's office look, as it ought to, in the light of science, sacred and real.

Indeed, by simply *massing* the products of the country or of the State we make agriculture look wonderful to the dullest eye. If all that our republic has produced of grains, vegetables, and fruit, in the last six months, could be gathered into one mass, it would fill a structure as high and wide as an ordinary country barn in New England, which would stretch from the easternmost Atlantic coast beyond the Mississippi, beyond the Rocky Mountains, to the mouth of the Columbia or the Golden Gate. And God made us to take our supplies from such a bin, every autumn, as *one* people.

If we could see such a collection of our national products, and behold the contributions of South, North, and West—each completing the other's lack, we should discern in the harvest a mighty cable woven out of cotton, pumpkins, hay, sugar-cane, and corn, binding East and West and South as potently as the slope of the Alleghanies and the tributaries of the Mississippi.

A single cotton-field may not seem to be a wonderful ob-

ject to contemplate. But think of all the cotton-fields of the world and their products this year when passed through looms. Weave the cotton into one continuous web, and you could roll out a sheet more than a yard wide which would reach from here to the sun. A careful calculator has conjectured that, "in the rapidly increasing demand for material for woven fabrics and for machinery to manufacture it, but a few years would be required for our looms to fill an order for webs of double belting sufficiently long to connect the sun with each of the planets, in the way motion is communicated from the large drum of a factory to a number of smaller ones." (Possibly it is dangerous to state this lest some friend who now believes intensely that cotton is lord of all civilization on the globe, may be possessed with the conception that the solar system does move by cotton bands, and that the force of gravitation is only another form of *long staple.*)

Think of the harvest, too, in the light of a calculation which has been made that if the whole human race were seated at once at a table spread with the bounties of the Creator, it would reach five times around the widest circumference of the globe! And yet twice a day, at least, the year through, such a table is spread—125,000 miles long—and a thousand millions of human beings are fed on the influence of sunshine.

Still we must come back to the position that agriculture is a very serious trust. There is little cause for gratulation and complacency, if in all this work we have not been studying the conditions of long continued fertility—if we have been "skinning the land." The race which does this, and is content to do it, after the fact is clearly revealed and the consequences are foreshown, is simply barbarous. All its immense dividends are gained by paying out the capital. It is traveling the swifter to bankruptcy. It is mortgaging and spending the patrimony of its children. It is wasting wealth and energy at such a rate that it will not be able to renew the present lands when they shall be exhausted, and will not have the capital or the enterprise to begin to

attack the richest soils which are the last to be approached. There is not probably in all the United States a tract of a hundred miles square which is cultivated in a way to get dividends and save capital both—not certainly a tract of that size where the capital is increasing in power of productiveness. Wherever you find any such districts, you will find them in the least-favored places—in States like Massachusetts and Rhode Island. There are very few districts yet where labor and industry are diversified enough within small compasses to furnish near markets, and so permit the land to be properly enriched, that its vigor may be sustained. Agriculture, as we have said before, is so important that its complete success is interwoven with a right distribution and order of occupations—the symmetry of the State. We have not sufficiently diversified industry on our coast, as yet, to make farming profitable to the land and to the tillers of it besides. So much the more reason, therefore, for notes of alarm and calls to the greater prudence, and economy, and science in what we do till. The agricultural societies are of inestimable importance in this regard. So our future and our civilization—and they should be preaching in our ears the principles of the indispensable gospel of economy—*smaller farms, more labor on them, and reverence for manure.* The man who, by putting the amount of labor on twenty acres which he spreads over fifty, could get the same product, is bound to retrench his limits and save the fertility of that extra thirty acres for a future emigrant. Not to do it is to live by marauding upon nature, not by cultivating the soil.

Smaller farms and concentration of labor and thought upon these are the necessary conditions of success in another prominent line of the glory of agriculture,—namely, bringing up all the products of a farm to the level of their type. California has been widely celebrated, you know, at the East, in the size of its productions. You have heard, perhaps, of the encounter between an Englishman and the market woman at a fruit-stand in New York. The Englishman had learned of the Yankee habit of bragging, and he thought he would cut the comb of this propensity. He

saw some huge water-melons on the market-woman's stand, and walking up to her, pointing at them with a look of disappointment, said—"What! don't you raise bigger apples than those in America?" The woman looked at him one second, and then retorted—"Apples! Anybody might know you was an Englishman. Them ain't apples! Them's *huckleberries.*'

The reputation of California has been connected with such a style of product,—beets that would beat Daniel Lambert in girth; sweet potatoes, one of which you must divide to make a bushel; cabbages that seem to have the hydrocephalus, literal *swell heads;* squashes as large as the nucleus of an average comet.

We have overcome most of our ambition in such directions, and are able to see how much more important *quality* is. The Creator desires and intends that the human race shall have perfect peaches, berries, vegetables, and grapes. But He does not make them for us. He holds off the sketch or picture of them in a vision, and tempts us to work up to them and attain them by delicate and patient skill. California has produced plums in larger quantities that are nearer perfection, I believe, than any other portion of the globe. In pears it is unrivaled. In the quantities of strawberries, peaches, and grapes, its fertility is amazing. But in the artistic excellence of these last, much remains to be accomplished. Who will give us a California peach that has the exquisite fragrance which we associate with that fruit when *finished?* A perfect peach should blend color, odor, and taste, in a harmonious, compound lusciousness, just as a perfect song combines melody imagery, and sentiment. A true peach is so much sunshine and dew wrought into *a poem.* The average of California peaches may be better than the average of Eastern ones. But we have not rivaled the orchards on the other side in bringing out the few that seem to be reminiscences of the fruit that tempted Eve.

Speaking of Eve at once suggests apples, and reminds us that, though there are a million of apple-trees in the State, either the trees or the soil need schooling in the art of pack-

ing properly a handsome apple skin with the richest pulp. The apple that enables us to understand the temptation of our ancestress, has not yet been offered for sale in California.

Our crop of strawberries is wonderful, and in connection with the grapes—marking the inauguration and the gorgeous finale of the Pacific fruit festival—should be accounted prominent in the blessings of a residence on this coast. But to be *very* critical, one must say, between grapes and strawberries, something like what the boarder said to his landlady: "A little more strength in the tea, ma'am, and not quite so much in the butter!" The strawberries, in spite of our fervid sun, are not *quite* sweet enough. The grapes are a little too sweet, and that excess of sugar puts too large a percentage of alcohol in the light wines we make from them. Whoever effects that transfer of sugar will help the creation of a perfect strawberry, and thus gain credit as an artist, and serve the cause of temperance, and earn blessings as a reformer. Think of the millions of gallons of wine which California will soon produce, and then compute the tens of thousands of gallons of alcohol which will be excluded from human stomachs and banished from existence by the horticultural skill that shall coax the vines to secrete a little more acid in their fruit!

The Creator calls on the farmer to work with him in completing the best fruits and the noblest animals, according to their types, and so make the world nobler by increasing their number on the earth. The true farmer is an artist. He brings out into fact an idea of God. I walk among the cattle-pens of a great fair with reverence and joy. Here at last we see the creatures which God intended to eat the grass and snuff the morning!

What honor the highest human intelligence pays to a painter like Landseer, who puts a superb mimic sheep on canvas; or to Troyon, who makes a dreamy-eyed beneficent cow look at us from his colors; or to Rosa Bonheur, who startles us with tableaux of horses clothed with thunder, and bulls whose look makes the room unsafe! This is right. But what shall we say of the farmers who push out

of existence the tribes and very types of imperfect or degenerate cattle, and call up the actual horses that make the verses of Job sing in the brain, and sheep fit to be clad in the finest merino, and herds whose every attitude is a new masterpiece of lordliness or beauty?

In looking at such stock, I can easily understand the enthusiasm which leads people to invest thousands and tens of thousands in the experiments of model farms. And then I wonder why anybody is led away by a literary or artistic ambition, if he is not conscious of the first class of powers. Why will a man try to write imperfect rhymes, if he can make a perfect strawberry vine or moss-rose? Why put a blundering idea into a book, if you can raise a litter of Suffolk pigs, and thus see a divine idea multiplied in symmetrical pork? Why waste efforts with pigments on canvas when you can put an Alderney calf on a landscape, with eye more poetic than any fawn or gazelle ever gazed with—or can ennoble an acre with an actual pair of young Devons surveying nature in their dumb dignity?

These gems of the annual shows make the farmer's office seem noble, a co-creator with the Infinite, make our average literature and art seem vapid, and in one light make society seem sad, for where are the men and women in society as yet that are as noble in their spheres as these animals—that are fit to own them, that come within a distant range of fulfilling their type in the Creator's mind, as the beasts do that are unstained with sin?

Rejoice, all of you that are called to the dignity, and trusts, and delights of the farmer or the horticulturist! Rejoice that you belong to a class through whom God is finishing his creation, and who, in enlarging the Divine bounty, are adding to the beauty of the world! Whether an acre, a garden spot, or a section is under your charge, feel more deeply your commission, be glad in the responsible honor of your lot. Study your calling more. Resolve to add to the fertility of your domain. Remember that weeds, and all tares, and slovenly labor are of the devil, and tend backward to chaos. Remember that economy is

the fountain of all agricultural opulence. Subdue the lust for immense ranches. If you have fifty acres, and burn to have fifty more, annex fifty that lie *beneath* those you now own, and gain your title by a subsoil plow. Own deep thus by agriculture, not wide by scratchiculture. Increase the beauty of your homestead, by taste which costs nothing; by the training of noble trees and lovely flowers, whose shade and grace will be a dividend of which you can't be cheated, and a gracious spring of good influence in the memory of your children.

California is sketched out by the Almighty as a vast canvas, such as no tribe of men ever received, for the genius and fidelity of colonists to fill with beauty. One of our own citizens has recently indulged an artist's dream of what the State may look like a hundred years hence. He sees in vision "long ribbons of fields stretching to Fort Tejon—each field a different color—green grapes, brown furrows, emerald vines, fringing hedges; grains growing, cream-colored grains, grains aurate and russet; houses dotted along like violets in flower-beds; houses dotted along like dewdrops in clover field; houses reaching forth like mosses in the crystal brook; houses clumped, houses grouped, hamlets modest, hamlets blooming and luxuriant like gorgeous creepers; villages with spires, towns with burnished domes goldened by the sun, and silvered by the moon; cities with minarets, cities with columns, cities with tall needle chimneys pouring up to God the frankincense of labor; terraced foot-hills laughing with generous villas, sloping forelands alive with herds; swelling mounds nestling with vines, oval knolls crowned with festoons of fruit blossoms, breathing sweet perfume to the sky; mountain gorges rolling out metals, mountain peaks staring at opposite peaks from bold-faced palaces, mountain rivulets murmuring to trellised rose-hidden cottages, mountain vales creeping away to love God in dreamy repose."

This gorgeous rhetoric from the pen of your gifted townsman, Rev. Mr. Anderson, may be the cool prose of 1962. Every wise farmer and gardener will help to make it so. It should make hearts swell with sacred pride to know that

this generation can contribute to such a future and insure to our posterity a land in which the snow of the Sierra and of Shasta shall emboss and crown such magnificence. And then not only may every California farmer sit under his own vine and fig-tree, but every Californian may drink tea plucked and cured under his own sky; may grind coffee freely from an Arabia at his doors; may sweeten it with sugar landed from no ship that has ever ventured beyond the Golden Gate; may take rice with it raised in our tules; may see the cotton for his household baled in his own county—not by slave labor—and sped for weaving to California mills; may buy his linen stamped with the marks also of domestic produce and skill; may purchase silks on which no duty is paid to a custom-house; and may smoke, in gratitude for his luxuries, tobacco raised in the Virginia within our own bounds.

If we are faithful to our duties, in 1962 the millions that shall live here, can sing with new meaning the old passover song of Palestine:—

"Thou crownest the year with thy goodness;
Thy footsteps drop fruitfulness;
They drop it upon the pastures of the wilderness,
And the hills are girded with gladness.
The pastures are clothed with flocks,
And the valleys are covered with corn:
They shout—yea, they sing for joy.

MARK TWAIN'S DESCRIPTION OF THE AZORE ISLANDS.

T 3 o'clock on the morning of the 10th of June, we were awakened and notified that the Azore Islands were in sight. I had only been in bed an hour and a half, and did not take any interest in the islands. But another persecutor came, and then another, and another, and finally, believing that the general enthusiasm would permit no one to slum-

ber in peace. I got up and went sleepily on deck. It was 5½ o'clock, and a raw, blustering morning. The passengers were huddled about the smoke-stacks and fortified behind ventilators, and all were wrapped in wintery costumes, and looking sleepy and unhappy in the pitiless gale and the drenching spray. The island in sight was Flores. It seemed only a mountain of mud standing up out of the dull mists of the sea. But as we bore down upon it, the sun came out and made it a beautiful picture. It was a mass of green farms and meadows that swelled up to a height of 1,500 feet, and mingled its upper outlines with the clouds. It was ribbed with sharp, steep ridges, and cloven with narrow cañons, and here and there on the heights, rocky upheavals shaped themselves into mimic battlements and castles, and out of rifted clouds came broad shafts of sunlight, that painted summit, and slope, and glen, with bands of fire, and left belts of somber shade between them—the aurora borealis of the frozen pole exiled to a summer land. We skirted around two-thirds of the island, four miles from shore, and all the opera-glasses in the ship were called into requisition to settle disputes as to whether mossy spots on the uplands were groves of trees or groves of weeds, or whether the white villages down by the sea were really villages or only the clustering tombstones of cemeteries. Finally, we stood to sea and bore away for San Miguel, and Flores shortly became a dome of mud again, and sank down among the masts and disappeared. But to many a sea-sick passenger it was good to see the green hills again, and all were more cheerful after the episode than anybody could have expected them to be, considering how sinfully early they had gotten up.

But we had to change our notions about San Miguel, for a storm came up, toward noon, that so pitched and tossed the vessel that common sense dictated a run for shelter. Therefore we steered for the nearest island of the group—Fayal (the people there pronounced it Fy-all, and put the accent on the first syllable). We anchored in the open roadstead of Horta, half a mile from the shore. The town has 8,000 to 10,000 inhabitants. Its snow-white houses nes-

tle cosily in the sea of fresh green vegetation, and no village could look prettier or more attractive. It sits in the lap of an amphitheater of hills which are from 300 to 700 feet high, and carefully cultivated clear to their summits—not a foot of soil left idle. Every farm, and every acre, is cut up into little square inclosures by stone walls, whose duty it is to protect the growing products from the destructive gales that blow there. These hundreds of green squares, marked by their black lava walls, make the hills look like vast checker-boards.

The islands belong to Portugal, and every thing in Fayal has a Portugese characteristic about it. But more of that anon. A swarm of swarthy, noisy, lying, shoulder-shrugging, gesticulating Portuguese boatmen, with brass rings in their ears, and fraud in their hearts, climbed the ship's sides, and various parties of us contracted with them to take us ashore at twenty-five cents a head—silver coin of any country. We landed under the walls of a little fort armed with batteries of twelve and eighty-two pounders, which Horta considered a most formidable institution, but if we were ever to get after it with one of our turreted monitors, they would have to move it out in the country if they wanted it where they could go and find it again when they needed it. The group on the pier was a rusty one—men and women, and boys and girls, all ragged, and bare-footed, and uncombed, and dirty, and by instinct, education, and profession, beggars. They trooped after us, and never more, while we tarried in Fayal, did we get rid of them. We walked up the middle of the principal street, and these vermin surrounded us on all sides, and glared upon us; and every moment excited couples shot ahead of the gang to get a good look back, just as village boys do when they accompany the elephant on his advertising trip from street to street. It was very flattering for me to be part of the material for such a sensation. Presently an old woman, with a fashionable Portuguese hood on, approached me. This hood is of thick, blue cloth, attached to a cloak of the same stuff, and is a marvel of ugliness. It stands up high, and spreads far abroad, and is unfathomably deep. It fits like a circus tent, and a

woman's head is hidden away in it like the man's who prompts the singers from his tin shed in the stage of an opera. There is no particle of trimming about this monstrous *capote*, as they call it—it is just a plain, ugly, dead-blue mass of sail, and a woman can't go within eight points of the wind with one of them on: she has got to go before the wind or not all. The general style of the *capote* is the same in all the islands, and will remain so for the next 10,000 years, but each island shapes its *capotes* just enough differently from the others to enable an observer to tell at a glance what particular island a lady hails from. Well, as we came along we overhauled a bent, wrinkled, and unspeakably homely old hag, with her *capote* standing high aloft. She was becalmed: or rather, she was laying-to, around a corner, waiting for the wind to change. When she saw me she drifted out and held out her hand. Such friendliness in a strange land touched me, and I seized it. I shook it cordially, and said:—

"Madame, I do not know your name, but this act has graven your—your—peculiar features upon my heart, and there they shall remain while that heart continues to throb."

She drew her hand away and said something which I could not understand, and then kissed her palm to me and courtsied. I blushed and said:—

"Madame, these attentions can not but be flattering to me, but it must not be—alas, it can not be—I am another's!" (I had to lie a little, because I was getting into a close place.)

She kissed her hand again and murmured sweet words of affection, but I was firm. I said:—

"Away, woman—tempt me not! Your seductive blandishments are wasted upon one whose heart is far hence in the bright land of America. The jewel is gone—you behold here naught save the empty casket—and empty it shall remain till grim necessity drives me to fill the aching void with vile flesh, and drink, and cabbage. Avaunt, temptress!"

But she would not avaunt. She kissed her hand repeatedly,

and courtsied over and over again. I reasoned with myself. This unhappy woman loves me ; I can not reciprocate ; I can not love a foreigner ; I can not love a foreigner as homely as she is ; if I could, I would dig her out of that capote and take her to my sheltering arms. I can not love her, but this wildly beautiful affection she has conceived for me must not go unrewarded—it *shall* not go unrewarded. And so I said, "I will read to her my poetical paraphrase of the Declaration of Independence."

But all the crowd said, "No ; shame, shame, shame · the poor old woman hasn't done any thing !"

And they gave the old hag some Portuguese pennies like shuffle-board blocks, and hustled her away, averring that she was begging, and not making love ; and thus, by the well-meaning stupidity of my comrades, I was prevented from implanting a sweet memory in the soul of one who may now go down to the grave with no sacred thing upon the altar of her heart but the ashes of a hopeless passion—and yet a stanza or two would have made her so happy !

Speaking of those prodigious Portuguese pennies reminds me that it takes 1,000 *reis* (pronounced rays) to make $1, and that all financial estimates are made out in reis. We did not know this until after we had found it out, and we found it out through Blucher. Blucher said he was so happy and so grateful to be on solid land once more, and that he wanted to give a feast ; said he had heard it was a cheap land, and he was bound to have a grand banquet. He invited nine of us, and we ate an excellent dinner at the principal hotel. In the midst of the jollity, produced by good cigars, good wine, and passable anecdotes, the landlord presented his bill. Blucher glanced at it, and his countenance fell. He took another look, to assure him that his senses had not deceived him, and then read the items aloud, in a faltering voice, while the roses in his cheeks turned to ashes :—

"'Ten dinners, at 600 reis, 6,000 reis ?' Ruin and desolation.

"'Twenty-five cigars, at 100 reis, 2,500 reis !' Oh, my sainted mother !

"'Eleven bottles of wine, at 1,200 reis, 13,200 reis.' Be

with us all! 'Total, 21,700 reis!' Great Cæsar's ghost, there ain't money enough in the ship to pay that bill! Go, leave me to my misery, boys, I'm a ruined community."

I think it was the blankest-looking party I ever saw. Nobody could say a word. It was as if every soul had suddenly been stricken dumb. Wine-glasses descended slowly to the table, their contents untasted. Cigars dropped unnoted from nerveless fingers. Each man sought his neighbor's eye, but found in it no ray of hope, no encouragement. At last the fearful silence was broken. The shadow of a desperate resolve settled down upon Blucher's countenance like a cloud, and he rose up and said: "Landlord, this is a wretched, mean swindle, and I'll never, never stand it. Here's $150, sir, and it's all you'll get—I'll swim in blood, sir, before I'll pay a cent more!"

Our spirits rose and the landlord's fell—at least we thought so; he was confused at any rate, notwithstanding he had not understood a word that had been said. He glanced from the little pile of gold pieces to Blucher several times, and then went out. He must have visited an American, for, when he returned, he brought back his bill translated into a language that a Christian could understand—thus:—

10 dinners, 6,000 reis, or	$6 00
25 cigars, 2,500 reis, or	2 50
11 bottles of wine, 13,200 reis, or	13 20
Total, 21,700 reis, or	$21 70

Happiness reigned once more in Blucher's dinner-party. More refreshments were ordered.

I think the Azores must be very little known in America. Out of our whole ship's company there was not a solitary individual who knew any thing whatever about them. Some of the party, well read concerning most other lands, had no other information about the Azores than that they were a group of nine or ten small islands far out in the Atlantic, something more than half way between New York and Gibraltar. That was all. These considerations move

me to put in a paragraph of dry facts, just here, which I might not venture to if I were writing about worn-out and written-out Europe.

The community is eminently Portuguese—that is to say, it is slow, poor, shiftless, sleepy, and lazy. There is a civil government appointed by the King of Portugal, and a military governor, who can assume supreme control and suspend the civil government at his pleasure. The islands contain a population of about 200,000, almost entirely Portuguese. Every thing is staid and settled, for the country was 100 years old when Columbus discovered America. The principal crop is corn, and they raise it and grind it just as their great-great-great-grandfathers did. They plow with a board slightly shod with iron; their trifling little harrows are drawn by men and women; small wind-mills grind the corn, ten bushels a day, and there is one assistant superintendent to feed the mill and a general superintendent to stand by and keep him from going to sleep. When the wind changes they hitch on some donkeys, and actually turn around the whole upper half of the mill till the sails are in proper position, instead of fixing the concern so that the sails could be moved instead of the mill. Oxen tread the wheat from the ear, after the fashion prevalent in the time of Methuselah. There is not a wheelbarrow in the land—they carry every thing on their heads, or on donkeys, or in a wicker-bodied cart, whose wheels are solid blocks of wood, and whose axles turn with the wheels. There is not a modern plow in the islands, or a thrashing machine. All attempts to introduce them have failed. The good Catholic Portuguese crossed himself, and prayed God to shield him from all blasphemous desire to know more than his father did before him. The climate is mild; they never have snow or ice, and I saw no chimneys in the town. The donkeys and the men, women, and children of a family, all eat and sleep in the same room, and are unclean, are ravaged by vermin, and are truly happy. The people lie and cheat the stranger, and are desperately ignorant, and have hardly any reverence for their dead. That latter trait shows how little better they are than the donkeys they eat

and sleep with. The only well-dressed Portuguese in the camp are the three or four well-to-do families, the Jesuit priests, and the soldiers of the little garrison. The wages of a laborer are 20 to 24 cents a day, and those of a good mechanic about twice as much. They count it in reis at a thousand to a dollar, and this makes them rich and contented. Fine grapes used to grow on the islands and an excellent wine was made and exported. But a disease killed all the vines fifteen years ago, and since that time no wine has been made. The islands being wholly of volcanic origin, the soil is necessarily very rich. Nearly every foot of ground is under cultivation, and two or three crops a year of each article are produced; but nothing is exported save a few oranges—chiefly to England.

The mountains on some of the islands are very high. We sailed along the shore of the Island of Pico, under a stately green pyramid that rose up with one unbroken sweep from our very feet to an altitude of 7,613 feet, and thrust its summit above the white clouds like an island adrift in a fog.—*Cor. N. Y. Tribune, June*, 1867.

AN ACCOUNT OF THE ABORIGINAL INHABITANTS OF CALIFORNIA, BY JACOB BAEGERT, GERMAN JESUIT MISSIONARY, RESIDENT 1751–1768.

As soon as the young Californian finds a partner, the marriage follows immediately afterward; and the girls go sometimes so far as to demand impetuously a husband from the missionary, even before they are twelve years old, which is their legitimate age for marrying. In all the Missions, however, only one excepted, the number of men was considerably greater than that of the females.

Matrimonial engagements are concluded without much forethought or scruple, and little attention is paid to the morals or qualities of the parties; and, to confess the truth, there is hardly any difference among them in these respects;

and, as far as good sense, virtue, and riches are concerned, they are always sure to marry their equals, following thus the old maxim: *Si vis nubere, nube pari.* It happens very often that near relations want to join in wedlock, and their engagements have, therefore, to be frustrated, such cases excepted in which the *impedimentum affinitatis* can be removed by a dispensation from the proper authorities.

They do not seem to marry exactly for the same reasons that induce civilized people to enter into that state; they simply want to have a partner, and the husband, besides, a servant whom he can command, although his authority in this respect is rather limited, for the women are somewhat independent, and not much inclined to obey their lords. Although they are now duly married according to the rites of the Catholic Church, nothing is done on their part to solemnize the act; none of the parents or other relations and friends are present, and no wedding feast is served up, unless the missionary, instead of receiving his marriage fees, or *jura stolæ*, presents them with a piece of meat, or a quantity of Indian corn. Whenever I joined a couple in matrimony, it took considerable time before the bridegroom succeeded in putting the wedding ring on the right finger of his future wife. As soon as the ceremony is over, the new couple start off in different directions in search of food, just as if they were not more to each other to-day than they were yesterday; and in the same manner they act in future, providing separately for their support, sometimes without living together for weeks, and without knowing any thing of their partner's abiding-place.

Before they were baptized each man took as many wives as he liked, and if there were several sisters in a family he married them altogether. The son-in-law was not allowed, for some time, to look into the face of his mother-in-law or his wife's next female relations, but had to step aside, or to hide himself, when these women were present. Yet they did not pay much attention to consanguinity, and only a few years since one of them counted his own daughter (as he believed) among the number of his wives. They met without any formalities, and their vocabulary did not even

contain the words "to marry," which is expressed at the present day in the Waicuri language by the paraphrase *tikére undiri*—that is, "to bring the arms or hands together." They had, and still use, a substitute for the word "husband," but the etymological meaning of that expression implies an intercourse with woman in general.

They lived, in fact, before the establishment of the Mission in their country, in utter licentiousness, and adultery was committed by every one without shame and without any fear, the feeling of jealousy being unknown to them. Neighboring tribes visited each other very often only for the purpose of spending some days in open debauchery, and during such times a general prostitution prevailed. Would to God that the admonitions and instructions of those who converted these people to Christianity and established lawful marriages among them, had also induced them to desist entirely from these evil practices! Yet they deserve pity rather than contempt, for their manner of living together engenders vice, and their sense of morality is not strong enough to prevent them from yielding to the temptations to which they are constantly exposed.

In the first chapter of this book I have already spoken of the scanty population of this country. It is certain that many of their women are barren, and that a great number of them bear no more than one child. Only a few, out of one or two hundred, bring forth eight or ten times, and if such is really the case, it happens very seldom that one or two of the children arrive at a mature age. I baptized, in succession, seven children of a young woman, yet I had to bury them all before one of them had reached its third year, and when I was about to leave the country I recommended to the woman to dig a grave for the eighth child, with which she was pregnant at the time. The unmarried of both sexes and the children generally make a smaller group than the married and widowed.

The California women lie in without difficulty, and without needing any assistance. If the child is born at some distance from the Mission they carry it thither themselves on the same day, in order to have it baptized, not minding

a walk of two or more leagues. Yet, that many infants die among them is not surprising; on the contrary it would be a wonder if a great number remained alive. For, when the poor child first sees the light of day, there is no other cradle provided for it but the hard soil, or the still harder shell of a turtle, in which the mother places it, without much covering, and drags it about wherever she goes. And in order to be unencumbered, and enabled to use her limbs with greater freedom while running in the fields, she will leave it sometimes in charge of some old woman, and thus deprive the poor creature for ten or more hours of its natural nourishment. As soon as the child is a few months old the mother places it, perfectly naked, astraddle on her shoulders, its legs hanging down on both sides in front, and it has consequently to learn how to ride before it can stand on its feet. In this guise the mother roves about all day, exposing her helpless charge to the hot rays of the sun and the chilly winds that sweep over the inhospitable country. The food of the child, till it cuts its teeth, consists only in the milk of the mother, and if that is wanting or insufficient, there is rarely another woman to be found that would be willing, or, perhaps, in the proper condition, to take pity on the poor starving being. I can not say that the Californian women are too fond of their children, and some of them may even consider the loss of one as a relief from burden, especially if they have already some small children. I did not see many Californian mothers who caressed their children much while they lived, or tore their hair when they died, although a kind of dry weeping is not wanting on such occasions. The father is still more insensible, and does not even look at his (or at least his wife's) child as long as it is small and helpless.

Nothing causes the Californians less trouble and care than the education of their children, which is merely confined to a short period, and ceases as soon as the latter are capable of making a living for themselves—that is, to catch mice and to kill snakes. If the young Californians have once acquired sufficient skill and strength to follow these pursuits, it is all the same to them whether they have parents

or not. Nothing is done by these in the way of admonition or instruction, nor do they set an example worthy to be imitated by their offspring. The children do what they please, without fearing reprimand or punishment, however disorderly and wicked their conduct may be. It would be well if the parents did not grow angry when their children are now and then slightly chastised for gross misdemeanor by order of the missionary; but, instead of bearing with patience such wholesome correction of their little sons and daughters, they take great offense and become enraged, especially the mothers, who will scream like furies, tear out their hair, beat their naked breasts with a stone, and lacerate their heads with a piece of wood or bone till the blood flows, as I have frequently witnessed on such occasions.

The consequence is, that the children follow their own inclinations without any restraint, and imitate all the bad habits and practices of their equals, or still older persons, without the slightest apprehension of being blamed by their fathers and mothers, even if these should happen to detect them in the act of committing the most disgraceful deeds. The young Californians who live in the Missions commence roaming about as soon as mass is over, and those that spend their time in the fields go wherever, and with whomsoever, they please, not seeing for many days the faces of their parents, who, in their turn, do not manifest the slightest concern about their children, nor make any inquiries after them. These are disadvantages which the missionary has no power of amending, and such being the case, it is easy to imagine how little he can do by instruction, exhortation, and punishment, toward improving the moral condition of these young natives.

Heaven may enlighten the Californians, and preserve Europe, and especially Germany, from such a system of education, which coincides, in part, with the plan proposed by that ungodly visionary, J. J. Rousseau, in his "Emile," and which is also recommended by some other modern philosophers of the same tribe. If their designs are carried out, education, so far as faith, religion, and the fear of God are concerned, is not to be commenced before the eighteenth

or twentieth year, which, if viewed in the proper light, simply means to adopt the Californian method, and to bring up youth without any education at all.

HOW THE OREGON TERRITORY WAS SAVED TO THE UNITED STATES.

E presume it is not generally known to our citizens on the Pacific coast, nor to many people in the Atlantic States, how near we came to losing, through executive incompetence, our just title to the whole immense region lying west of the Rocky Mountains. Neither has due honor been accorded to the brave and patriotic man through whose herculean exertions this great loss and sacrifice was prevented.

The facts were briefly and freshly brought out during the recent meeting at Pittsburg of the "American Board of Commissioners for Foreign Missions," in the course of an elaborate paper, read by Mr. Treat, one of the secretaries of the Board, on the "Incidental Results of Missions."

In the year 1836, the American Board undertook to establish a mission among the Indians beyond the Rocky Mountains. Two missionaries, Rev. Mr. Spalding and Dr. Whitman, with their wives—the first white women who had ever made that perilous journey—passed over the mountains with incredible toil, to reach Oregon, the field of their labor. After remaining there for a few years, Dr. Whitman began to understand the object of the misrepresentations of the Hudson's Bay Company. He saw, contrary to the reiterated public statements of that company:—

1. That the land was rich in minerals.

2. That emigrants could cross the Rocky Mountains in wagons, a feat which they had constantly asserted to be impossible.

3. That the Hudson's Bay Company was planning to secure the sole occupancy of the whole of that country, by

obtaining a surrender of the American title into the hands of the British Government.

Seeing these things, but not knowing how very near the British scheme was to its accomplishment, Dr. Whitman resolved, at every hazard, to prevent its consummation. He undertook, in 1842, to make a journey on horseback to Washington, to lay the whole matter clearly before our Government by personal representations. Being a man of great physical strength and an iron constitution, he accomplished the long and perilous journey, and reached Washington in safety. The remainder of the story we will relate in the language of the Boston *Congregationalist:*—"Reaching Washington, he sought an interview with President Tyler and Daniel Webster, then Secretary of State, and unfolded to them distinctly what was going on. Here he learned that a treaty was almost ready to be signed, in which all this Northwestern Territory was to be given up to England, and we were to have, in compensation, greater facilities in catching fish. Dr. Whitman labored to convince Mr. Webster that he was the victim of false representations with regard to the character of the region, and told him that he intended to return to Oregon with a train of emigrants. Mr. Webster, looking him full in the eye, asked him if he would pledge himself to conduct a train of emigrants there in wagons. He promised that he would. Then, said Mr. Webster, this treaty shall be suppressed. Dr. Whitman, in coming on, had fixed upon certain rallying points where emigrants might assemble to accompany him on his return. He found nearly one thousand ready for the journey. After long travel, they reached Fort Hall, a British military station, and the commandant undertook to frighten the emigrants by telling them that it was not possible for them to go through with wagons; but Dr. Whitman reassured them, and led them through to the Columbia, and the days of the supremacy of the Hudson's Bay Company over Oregon were numbered."—*New York Evening Post, November*, 1866.

RECIPES FOR MAKING POETRY.

LL we require from the readers of the MIRROR, in making use of the following recipes, is a sample from each lot. We shall not be responsible for the material wasted in fruitless experiments :—

To make Miltonic Poetry.—Take five hundred angels, one thousand devils of the worst hue, one Lucifer, ten worlds, two suns, ten moons, and stars to equal, twenty tons of saltpeter, brimstone, and tar, with a good degree of chloroform, put it all in a great caldron, over a fire of white heat, and when sufficiently conglomerated put a live man and woman in it, and stir. You will then produce the best "imitation of the great immortal" ever read. Try it, and do not be discouraged if you do not succeed at first.

To be a Great Dramatist.—Take all the pride, selfishness, and hate, villainy, cowardice, and passion, that can be had in poor human nature. Then take thirty beautiful maidens, fifty libertines, from the Church and State, ten dukes, seven cross old queens, mix thoroughly—then get three ghosts, ten goblins, twenty old hags, and thirty witches, tie them together with snakes and boa-constrictors; let them seethe and boil till wanted—then serve to suit, a la mode Macbeth, Hamlet, Lear, &c.

To be a Goldsmith.—Sell all your cotton shirts, run in debt to twenty tailors, owe your landlady, then crawl between two feather beds, and while you are waiting for your washerwoman to dry your only suit, fancy yourself a poet, and you will doubtless write a description of a "Village Pastor" that will astonish you.

To imitate Gray.—This is very simple, and we advise all to try it, especially young ladies given to "flights of fancy." Go into an old dilapidated church, lean upon the broken windows and think of your dead grandfather, and grandmother, and all their ancestors. Very soon you will produce by far a better elegy than the original.

To be a Burns.—Strip off your gold chains and rings, shave off your dainty mustache, put on a pair of leather brogans with clean stockings, a pair of corduroy breeches, and a strong wholesome shirt, and on the whole make "a man of yourself;" then sit in your cottage door, put your head in your wife's lap (if you have one, if not your mother or sister will do), and let all the tender and holy associations and impulses of your nature inspire you, and if you do not become a poet *you ought to.*

To write Byronic Stanzas.—Get a barrel of tar, a hogshead of brandy, a hundred gallons of ottar of roses, one man "nobly born," and five hundred "beautiful women," let them simmer together with a gentle mixture of sulphuric ether. We advise all *honest* young men to put away so unbecoming a thing as "manliness," and adopt the above method.

A la Tom Moore.—Get five hundred swarms of the best bees, take all the honey they can make in a thousand years. Buy all the perfumes in Turkey; get ten thousand pounds of rose leaves, add the juice of all the oranges, pomegranates, and bananas that can be had, now and then some of the "pure juice of the grape," just to flavor, and if this does not suit the taste of "Poor Tom" himself, try one hundred of the best "Madeira," and all the Peris in Christendom, and *out of it*, will obey your call

Much other valuable instruction might be given, but time will not permit, and therefore, I will close this "valuable collection" with the addition of a single one I had well-nigh forgotten—but it is hardly worth the trouble, as very few will wish to secure it, and that is—

To be a True Genius—Do not make a fool of yourself!—*San Francisco Mirror*, September 12, 1860.

CALIFORNIA WINES.

LOS ANGELES, *July* 2, 1866.

THADDEUS STEVENS, House of Representatives, Washington, D. C.—Dear Sir: A copy of the *Daily Congressional Globe* of May 22d, has been forwarded me, containing the debate on the imposition of internal tax on native wines. On the part of the vine-growers of California especially, I tender you their lasting gratitude for the prompt, liberal, and wise manner in which you defended the native wine interest of our country. Your words: "Allow these producers to go on for the present, at least, without any tax, until they get a foothold," and "I hope, therefore, for the present, we will not put our heavy hand on this infant, lest it should become deformed," are words worthy of a statesman, and will remain long in the grateful remembrance of all vine-producers. It was in this wise that the great Chaptal spoke to the French Government in defense of the wine interests of France; and what would France be to-day were it not for the national importance that the annual production of a thousand millions of gallons of wine give her, increasing day by day her wealth, her commerce, and the health and morality of her people?

The greater part of our vast country—but more especially the Pacific slope—abounds with soil and climate congenial to the culture of the grape, which is its natural home, foreign as well as native. And, therefore, all classes of wines can be made there, more particularly the potent wines, like Port, Sherry, and Madeira, in greater abundance and of as good quality as in any country. The wine business emphatically belongs to large capital; it requires cumulative investments from planting the vineyard, building cellars, procuring vessels, the necessary appliances for manufacture, to holding the wine for proper maturity and development of its bouquet. Adam Smith says that vine culture is the most profitable of all agriculture, yet large capital is ever loath to invest in any enterprise where it

can not see an immediate return of profits. More so in California than anywhere else, on account of a high rate of interest and labor. The development of this great national branch of industry devolves at last on farmers with ordinary means, who not only need but merit in a high degree the fostering encouragement of a wise Government. These farmers are struggling for a "foothold" for a wine interest that is bound to become greater than that of France. Why, then, should the Government crush and "deform" this infant, that in time must grow into a giant of agriculture and commerce, and a promoter of national wealth and morality?

The hygienic influences of wine-drinking on public health, and its moral tendencies, should be well considered and understood by our legislators. Alcohol is chemically a solvent, a waster of the animal tissues, and in the stomach undergoes no change by digestion, as food substances do, but is carried through the circulation in its normal condition, disintegrating, as it were, the human organization and producing general irritation. Yet alcohol has its beneficial influences and uses in the animal economy, when taken with due moderation and in a convenient and rational form.

A certain amount of alcohol, or a certain amount of fatty substances, is absolutely necessary to the human body to maintain combustion in the lungs. In order to produce animal heat a greater degree of combustion is required in a cold than in a warm temperature; hence the inhabitants of high latitudes are obliged to consume vast quantities of fatty and oily substances, like blubber, in the absence of alcohol, to sustain respiration and life, whilst those who inhabit mild climates use proportionably less of these substances, because the radiation of the heat of the body is less.

Human food can be divided into two classes: First—Such as serve to supply the organs of respiration with fuel and that form fat in the body; for example, all kinds of sugar, starch, gum, beer, wine, bread, potatoes, rice, sago, arrowroot, and some vegetables and fruit, so far as the latter contain starch and gum. Second—Such as serve to produce the plastic substances of the body, as blood, flesh, and

muscles; for example, meat, cheese, eggs, and the gluten of cereals, especially seeds like beans, peas, &c., also the leaves and stems of salad plants. Where all the people, as in France, and on the Rhine, drink wine as a common beverage, or as we drink tea and coffee, they consume but half the quantity of bread or half the substances of the first class, for which wine becomes a substitute. The illustrious Liebig speaks substantially as follows of the use of wine in his letters on chemistry: "Wine contains alkalies, organic acids, and other substances salutary in their effects on health, and in this respect differs widely from brandy, which consists of water and only one constituent of wine—namely, alcohol. A given quantity of wine distilled into brandy will produce an amount of intoxication that double the quantity of the wine that produced it would not, because alcohol is concentrated in the brandy, and devoid of the healthy substances of the wine, which remain behind in the still. If the brandy and the other substances that remain in the still are mixed again, the product won't make wine, because the affinity of these substances has been broken up by the operation of distillation, and can not be restored by any human ingenuity; and, besides, that much of the volatile oils and acids are lost. The commercial value of wine is in proportion to its wholesome effects on the human system by increasing the action of secretion in the lungs and kidneys; nor is the value of good wines estimated by the amount of alcohol they contain, but upon the non-volatile constituents. Bouquet has only an influence on its price but as it indicates the presence of these other constituents which produce wholesome effects.

As a means of restoring cheerfulness when the body and mind have been exhausted or worn out by age or over-exertion, as a means of correction and equalization where disproportionate food has caused irregularities in the human organism, or as a protection against casual derangements produced by inorganic substances, wine is not surpassed by any production of nature or art. Rheumatism and stone complaints are nowhere less frequent than among the wine-drinking population of the Rhine, and in no district

of Germany are the drug stores so valueless as in the rich cities of the Rhine, for wine is considered there the universal panacea for the healthy and the sick, as well as the milk of old age. As a means of respiration wine performs important functions. By its use starch and sugar containing substances, especially fat, become superfluous. Providence, then, has given us the most extended wine country in the world, as if to complete our means of industry, wealth, and human happiness; and who so insensate as to place obstacles in its development? Wine drinking can only promote rational temperance.

Our country, which produces so much raw material for manufactures, and at the same time produces food in greater abundance than anywhere else in the world to subsist our operatives, must become the grand center of manufactures; it is a law of compensation that, where food and material are found together, manufactures must prosper, for it is easier to import an operative than to transport to him food to subsist on, and crude material to work on all his lifetime. Unwonted obstacles may retard the operations of this law, but it will prevail at last. This being the manifest destiny of our country, we must not shut our eyes to the fact that the finger of Providence points out almost everywhere that we have a wine country, so essentially necessary to the health, longevity, and happiness of an immense population. The men who get out coal will get out more of it, and the man who makes the iron will make more of it, and of better quality, and will live much longer and happier doing it, when they drink wine instead of whisky. Humanity cries out for the discardment from the machine-shop and the furnace that friction that the use of ardent spirits produces, and the substitution therefor of pure native wines. Reverse things, and make wine the luxury of the working classes instead of the rich, and our great country will become still more powerful and more healthy in mind and body. At the present time, when the ancient disease of trichinis is threatening public safety, the fear is not altogether unfounded that we might be obliged to abstain from the use of pork, as all ancient nations have done, doubtless through

necessity. Then where would the poor man find a suitable substitute for the imperative demand of nature to replace the fat substances which supply his vitality, if not in native wines? Most respectfully, your obedient servant

MATTHEW KELLER.

CONCLUSION OF THE SPEECH OF E. R. HIGHTON, ON PROPOSING A TOAST TO THE BENEVOLENT SOCIETIES OF SAN FRANCISCO, MAY 24, 1867.

"OUR SISTER BENEVOLENT SOCIETIES."

This toast was proposed by E. R. Highton, Esq. The following is the concluding portion of his remarks upon the occasion:—

WHEN Father Junipero Serra, standing on a western headland of this peninsula, on the seventeenth day of September, 1776, according to the forms of his Church, solemnly dedicated the virgin soil to Christian enterprise, what sanguine prophet would have been bold enough to predict the present condition of the solitary waste that surrounded him? And how impossible it must have been to foresee the development of those civilizing influences which have so immeasurably surpassed any conceivable anticipation of that enthusiastic and devoted missionary!

Who would have supposed, twenty years ago, that here, amid those wind-blown hillocks, the struggling efforts of a few missionary fathers, in their endeavors to impart a rudimentary civilization to a tribe of half-naked Indians, would be superseded by the numerous organizations for religious and social improvement which have sprung into existence, or that the primitive Church at the Mission Dolores, would be overshadowed by the massive Christian temples, the public schools, and various institutions of science, art, and benevolence, that now adorn our city; or, who would have imagined that on the site of those barren sand hills an assembly like this would be discussing measures for the alleviation of human misery?

At a still more recent period, amid the disorders of our early settlement, who among those of us who are pioneers of our present California society, would have thought that in so short a time the erratic, impulsive, but lavish generosity of our crude, individualized community would have been gathered up in the "San Francisco Benevolent Association," and the various other charitable societies of our city?

It is true that the developments of benevolent enterprise throughout the world which I have attempted to suggest for our contemplation, have been, and are, represented in this locality in miniature only; but they are replete with indications of a rapid progress and an intense vitality. Out of the very complexity of our social condition will arise reciprocal toleration and esteem, and increasing co-operative union for practical goodness, which must eventually issue in a wider philanthropy and a grander civilization, refracting upon the opposite shores of Asia the convergent rays of its moral and intellectual light—exhibiting to its stagnant philosophers, by the effluence of Christian benevolence, a practical exemplification of the barren maxims of Confucius; superseding the institutes of Menu by the Sermon on the Mount, and extinguishing the fires of Zoroaster in intenser rays from the Star of Bethlehem.

Mr. Chairman: On this convivial occasion, it may seem somewhat discordant to refer to serious matters of personal responsibility; but the co-operative sympathy which my theme, at least, implies, rests upon our individual apprehension of mutual obligation. By the attractive force of a sympathy deep-seated in our moral natures, and by an inevitable destiny, we are each of us linked to all that bears the stamp of humanity. "We can not live to ourselves alone." We are connected by this subtle, all-pervading influence with all heroic deeds of the past, and identified with all benevolent labors of the present, while its intuitions realize the bright hopes of the future.

In all the transactions of life, we endeavor to leave the impression that *I have been*. In the aspirations for posthumous fame, in the dread of the stigma of posterity, and

in the undefined longings for a more perfect spiritual communion which we all experience, we read the impress of immortality, indicating the eternal progress of our spiritual being, and urging us onward in the path of love and duty.

"Tis not the whole of life to live,
Nor all of death to die."

We are told of a time when we shall be called to witness a more magnificent festival, under a more spacious dome, and surrounded by scenes of the most awful sublimity. On that occasion, eligibility to pass the vestibule, we are assured, will depend exclusively on moral qualities and actions. The invitations will not be, Come, for you are a true-born Briton, or a chivalrous Frenchman, or a philosophic German, or a free and enlightened American, or because you were a member of this or that society or church, but it will be, Come! "for I was a-hungered, and ye gave me meat; I was thirsty, and ye gave me drink; I was a stranger, and ye took me in: naked, and ye clothed me; I was sick, and ye visited me: I was in prison, and ye came unto me." And when these personal attentions are disclaimed, the Grand Master of those awful ceremonies will say: "Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me."

With an entire concurrence in the sentiment I have so discursively attempted to illustrate, and with my whole heart, Mr. Chairman, I beg to propose, "Our Sister Benevolent Societies."

POISON ANTIDOTE.

A FARMER sends an Atlantic exchange the following: "It is now over twenty years since I learned that sweet-oil would cure the bite of a rattlesnake, not knowing that it would cure any other poison. Practice, observation, and experience have taught me that it will cure poison of any kind, both man and beast. I think no farmer should be without a bottle of it in his house. The patient must take a spoonful internally, and bathe the wound for a cure. To

cure a horse it requires eight times as much as it does a man. Here let me say of one of the most extreme cases of snake-bite in this neighborhood, eleven years ago this summer, where the case had been over thirty days' standing, and the patient had been given up by his physicians. I heard of it, carried the oil, gave him one spoonful, which created a cure. It will cure bloat in cattle caused by eating too freely of fresh clover; it will cure sting of bees, spiders, or other insects; and it will also cure persons who have been poisoned by a low running vine growing in meadows, called ivy."

QUARTZ MINING IN ANCIENT EGYPT.

MINING for gold in auriferous quartz veins was prosecuted extensively in Egypt as early as 2,500 years ago—perhaps much earlier. Fifty years before the time of Christ there was a picture in one of the temples in Thebes of an Egyptian monarch making a present to the gods of all the gold and silver which he received in one year from his mines; and the amount, as near as we can now arrive at it, was about $30,000,000.

The historian Diodorus Siculus, who mentions this picture, adds, as translated in "Jacobs on the Precious Metals":—"On the confines of Egypt and the neighboring countries there are parts full of gold mines, from whence, with the cost and pains of many laborers, much gold is dug. The soil is naturally black, but in the body of the earth there are many veins, shining with white marble (quartz), and glittering with all sorts of bright metals, out of which those appointed to be overseers cause the gold to be dug by the labor of a vast multitude of people; for the kings of Egypt condemn to these mines not only notorious criminals, captives taken in war, persons falsely accused, and those with whom the king is personally offended, but all their kindred and relations. These are sent to this work either as a punishment, or that the profit and gain of the king

may be increased by their labors. There are thus infinite numbers thrust into these mines, all bound in fetters, kept at work night and day, and so strictly guarded that there is no possibility of their effecting an escape. They are guarded by mercenary soldiers of various barbarous nations, whose language is foreign to them and to each other, so that there are no means either of forming conspiracies or of corrupting those who are set to watch them; they are kept to incessant work by the rod of the overseer, who, besides, lashes them severely. Not the least care is taken of the bodies of these poor creatures; they have not a rag to cover their nakedness; and whoever sees them must compassionate their melancholy and deplorable condition; for, though they may be sick, or maimed, or lame, no rest nor intermission of labor is allowed them. Neither the weaknesses of old age nor the infirmities of females excuse any from that work to which all are driven by blows and cudgels, till at length, borne down by the intolerable weight of their misery, many fall dead in the midst of their insufferable labors. Thus these miserable creatures, beingdestitute of all hope, expect their future days to be worse than the present, and long for death, as more desirable than life."—*Alta Californian*, 1859.

THE FAIR TAMBOURINIST.

With feet half naked and bare,
And dress all tattered and torn,
With a penny here and a mockery there,
And floods of derision and scorn,
She wanders the street wherever her feet,
Weary and willing, are borne,
With an eye as bright and a cheek as fair
As the earliest blush of the morn.

Wandering up and down,
And driven from door to door,
A jest for every idle clown
And a butt for every boor;

While the velvet-slippered, in satin and lace,
Go rustling by her side,
With a frozen heart and a curtained face
And a lip curled into pride.

So beautiful, yet so frail,
So willing and yet so weak,
Oh, what if the heart should fail,
And a heavenly purpose break!
And the dens and kennels and brothels of hell
Another poor victim hold,
A celestial spark be quenched in the dark,
And an angel bartered for gold!

No wonder the heart should fail,
A heavenly purpose fade,
The eye grow dim and the cheek grow pale
When none stand ready to aid!
No wonder the lairs and cradles of hell
So many poor victims should hold,
When the good are content to worship their God
And the rich to worship their gold.

Move patiently on, O Earth!
Till Mercy's wandering dove
Shall fly to the realm of its birth,
And rest in the bosom of Love;
Move patiently on till the crucified Christ
Shall gather his radiant crown,
From the lowly flowers and bleeding hearts
That the world has trampled down.

LYMAN R. GOODMAN.

CALIFORNIA: REMINISCENCE AND CAPABILITIES.

TWELVE years ago, an unusual commotion was observed in the Atlantic States. In every State of the Union, from Maine to Louisiana, from the sea-coast to the western frontier, in every city, town, and village, a universal excitement prevailed. Yet no devastating war had swept over the land, no epidemic had scattered the

seeds of death in its mournful train ; there was no apprehension of foes from abroad, nor domestic dissensions which threatened the peace of the Union.

Yet in the streets, and at the corners in every city, in the public places of every town in the whole United States, knots of men were congregated, earnestly engaged in discussing some momentous subject, and tones of wonder, perhaps incredulity, were heard, instead of warm debate ; the inevitable result of difference of opinion. Newspapers were read with avidity, post-offices and bulletin-boards were besieged eagerly for news—in fact, the nation seemed to

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feel a thrill to its very center, as if some mighty change was on the eve of taking place. And, indeed, an event of vast moment was about to occur, which would be felt, not in our beloved country alone, but over the whole civilized globe.

A little later, and the mists which seemed gathering upon our horizon grew more portentous ; the breeze which had been gently blowing, was thickening to a gale, ere long to burst into a whirlwind that should be felt in every town and hamlet of our free land, and produce such a change as had never been felt in time of peace since our country took its place among the nations of the earth. A note of preparation was sounded. All classes seemed actuated by one

common desire. Men's eyes were turned west, as if a new star had arisen, and all were eager to gaze on its splendor. In a few, very few months, an army of hardy men had congregated upon the western frontier in time of peace, without "the pomp and circumstance of war"—without leaders, or organization as a body—with no corps of reserve, no depots of supplies for their use on a march, for a march was most manifest—and "Westward Ho!" and the Plains, was the cry, and California the destination.

Depending on individual strength and such supplies as they could carry with them, these hardy pioneers were ready to dare the perils of the plains, to swim the rushing streams, to climb the highest mountains—ay! to scale the highest barrier of earth, to accomplish their purpose; to suffer hunger, and thirst, and privation in every form, rather than not prove victorious in their undertaking.

On the sea-board, too, all was life and activity. Merchants were freighting ships, manufacturers were upon the alert, men were securing a passage to tempt the storms of ocean, reckless alike of the heat of the tropics, the cold of the stormy cape, of shipwreck, or danger. A mighty exodus was at hand. To accomplish this, to raise the means of joining the swelling throng, lands and houses were often mortgaged for inconsiderable sums, and families by these means eventually irreparably ruined; fathers bid farewell to wife, children, and home, perhaps never to return; the most tender ties were severed, and tears and sighs were freely mingled with the bold tones of hope and resolution.

What could have so moved our people? What magic had exerted its power to produce so great a commotion throughout the land? The talisman was gold! Though thousands of miles of deserts intervened, though the path was beset by tribes of hostile Indians, though when once fairly launched upon their weary journey, they were beyond all human aid in distress or suffering, save only such as they might afford each other, none of these considerations seem to daunt them for a moment, but rather appeared to stimulate their love of adventure; they halted not, nor hesitated a moment, for the *talisman was gold!*

Upon the Pacific Ocean, between the thirty-second and forty-second parallels of latitude, was situated a country which only two years previous had been wrested by conquest from Mexico. Whatever Government may have known of the capabilities of this isolated and newly-acquired territory, its geographic characteristics and resources, the people in mass new but little. To them it was nearly a *terra incognita.* Fremont and Bryant had visited it. They spoke of the salubrity of the climate and the fertility of the soil, but blended with personal narrative, of the perils of travel, of wide wastes of desert and of plains, and almost inaccessible mountains, the fairer portions of this land and its capabilities were passed over unheeded, and less was known of California then than there is of Australia now.

A handful of brave troops had conquered a barren, mountainous country, inhabited by half-civilized Mexicans, with a few—very few—Europeans and Americans, who attracted less attention in the States than is now given to the citizens of our nearest Territories. There was a large valley inhabited by native Californians, whose chief resources were in their cattle and horses. There was no trade, no manufactures of moment. The rest was known as barren mountains, whose snowy crests blended with the skies, unfit for aught else than the habitation of the miserable Digger Indian and wild beasts of prey. Briefly, this was the substance of our knowledge of this country on the Pacific, extending from north to south about seven hundred miles.

There were but four or five old Spanish towns—if the old Missions could be called towns—and the whole country, and even Monterey, the capital, and its largest town, was scarcely as large as Grass Valley is at this moment.

But the hour had come in which Providence was about accomplishing one of those mighty changes which mark the history of nations. The accidental discovery of gold at Coloma by Marshall, while washing out a mill-race, changed the whole feature of the kaleidoscope. The news flew with the wind. Those already living here, who hitherto had expected, and would have been content, with a moder-

ate competency, rushed to those very barren and snowy mountains to secure a fortune. All was wonder and feverish excitement. Letters were written to the States, official reports of the richness of the discoveries were made, but so incredible did they appear, that for a season they were suppressed by the Government, which was justly unwilling to excite the public pulse too high by such publications. But letter after letter came, reiterating the truth of these discoveries, and at last, late in the fall of 1858, an old man named Cutting arrived in New Orleans from California, having in his possession a handsome sum in specimens, which he had dug himself in the mines. Of course the papers throughout the South and West gave extended notices of this, and Cutting (with whom I was personally acquainted) was lionized in his passage from New Orleans to Illinois.

But the matter was by this time placed beyond a doubt, and the excitement fanned to a flame; the rush commenced; the throng, bidding farewell to home, domestic comfort, and the even tenor of social ties, entered upon the trials and hardships of the pioneer emigrant, in search of this *barren*, mountainous, and desolate incognita of California.

I have stood upon a lofty eminence on the Western prairies, as well as upon the Rocky Mountains, where the view embraced the horizon, and as far as the eye could reach I have seen one continued, unbroken line of moving wagons, with their white covers oscillating in the sunlight. I might have stood for a day, and watched the moving mass, and yet, between the rising and the setting of the sun, this throng of life would not have passed by; and during the whole distance of about two thousand miles, I was never moving with my own train alone for a single hour. Many trains were always in sight, and thus it continued from May till the autumn suns had crested the Sierras.

How many of this mighty throng had for an object the settlement of the country, the development of its resources, the expansion of its capabilities? How many of them had any idea that this new country had any capabilities beyond that of producing gold? How many of these pioneers but

expected to return? Among all with whom I came in contact, there was but a single family who designed to make California home. There may have been many others, but the universal cry was, or seemed to be, "Make our pile—go home to enjoy it." They knew nothing—they thought nothing—of what California could produce beyond its golden sands. They cared not—the talisman was gold! Gold they came for. It was for gold they had dared the perils of the plains and the storms of the ocean, and gold they would have. Among the great mass there was no idea of making a home in California, of surrounding themselves with comforts, of transporting their domestic ties here, and making an abiding place for life; of building up a State, of ascertaining if it was capable of being rendered the abode of improvement and of cultivated minds. It was gold, gold, gold! and getting gold was at first the all-pervading idea, the motive of exertion, the main-spring of action.

Yet Providence was working out his own ends with the genius of our people, and these, too, without the cruelties and insatiate love of plunder which actuated the conquerors of Mexico or Peru. It was wisely decreed that "man should earn his bread by the sweat of his brow," and that gold should be had, if at all, only by patience and unremitting labor.

In this pursuit many found themselves physically unqualified for the severe labor necessary to unearth the treasure, and many, too, were unsuccessful in their search, and turned from the mines to seek more congenial pursuits. Necessity compelled many to engage in other occupations. All could not dig; there must be "hewers of wood and drawers of water." Other crafts were necessary for the good of the body politic, and other professions soon became in demand. Soon the discovery was made that the seeming barren plains which they had passed over in midsummer, when the ground was parched and dry, would yield by proper irrigation and culture, not only the grain and fruits of the Northern States, but many of those of the tropics. They discovered in time that the fig, the olive, the almond, and the pomegranate grew side by side with the apple, the

plum, the peach, and pear. A new phase was given to the pursuits of a proportion of that motley throng, who had assembled here from all parts of the world to dig gold. It was discovered that California had other capabilities than the production of gold alone. It was capable of making a good and well-garnered home for families; it was capable of affording even more comforts of life than any one of the Atlantic States. There was a salubrity in the climate which they had not known at home, and the soil was more productive. In a short time men, by agriculture and by trade, became in easy circumstances, built goodly houses, sent for their families, and seemed content to adopt this hitherto *barren and mountainous* country for a *home*. Towns began to spring up, even in the mountains, as well as upon the plains, and upon the rivers and seaboard; and then came the necessity of government. Ideas rapidly advanced that, after all, California was capable of supporting a large population, and furnishing a home and happiness beyond the mere production of gold. A State Government was now a matter of necessity.

With Californians, the wish to do, is but the precursor of the will; the will once formed, the work is done, and in 1850, only a year from the great emigration, and three from the conquest, we were knocking at the door of Congress for admission as a State. When Congress in its age, and with its antiquated notions, looked over its spectacles upon us with an incredulous smile of pity, as a little child claiming our share of Uncle Sam's heritage, we boldly affirmed that we did not ask it as a favor, *we demanded it as a right*.

It certainly did appear somewhat precocious for a Territory of only three years of age, to be asking admission as a State, and it is not strange that our rulers could not understand our capability of sustaining a State Government. They knew that we were sending them large amounts of treasure, and this they deemed was all California was capable of doing, and they withheld their assent to our just demands most vexatiously, until our patience was almost exhausted, for the exigency of the case made it important

for our own welfare, that we should have a Government more effective than simply a territorial one.

When, at length, the announcement was made that Congress had finally, though grudgingly, admitted California as a State, and that the acts of the people in the premises were confirmed, the "glad tidings" were hailed with joy, bonfires were kindled, artillery pealed, and acclamations resounded in every town throughout the length and breadth of the land, for the people of California loved their brethren at home, and above all the glorious Union of States which bound them in one common tie, and they ardently desired that the star-spangled banner should wave over mountains and plains, a symbol that this, too, was "the land of the free and the home of the brave."

Processions, orations, odes, and illuminations were the order of the day. The thousand ships which floated proudly in the harbors, were gayly decked with streamers, gun after gun boomed over the placid waters, and could our Atlantic brethren have witnessed the general joy of the brave pioneers, they too would have gladly joined in the prolonged shout of "The Union, Now and Forever!"

The Government once formed, other events naturally followed, and prominent among them was a desire to ascertain the resources of our infant State. The aid of science was invoked, and geological and agricultural surveys instituted. Gold and silver we knew were buried in our hills, or sunk beneath the streams, but what has been the result of further investigation? Why, that we have within our own territory the *elements of a nation.* Our water-power is unlimited. There is enough to move the whole machinery of any one State. Our agricultural lands are capable of supporting a population larger than the whole of Mexico. By actual experiment it is found that California will produce cotton, sugar-cane, and rice, and also the cereals of the Northern States. We are capable of manufacturing every thing in California, from our own resources, that a nation actually needs for its people. We have an abundance of timber for ship-building. The silk-worm and the mulberry thrive as well here as in Italy, while the grape rivals those

grown in sunny France. Our very hills, which but a short period since were looked upon as barren and worthless, are found by experiment to be capable of growing thrifty vineyards and cereal grains. They are already attracting the attention of farmers, and every available location is being taken up.

The day will inevitably come when we will rival the vine-growing districts of the old world, when we shall become a large exporter of wines and brandies, and if the time ever comes when our mines shall be worked out, our very hills and valleys will not fail to pour out their agricultural treasure for the support of a large population.

California possesses within her borders, a territory of, in round numbers, 100,000,000 acres. Deduct from this 60,000,000 for lakes, rivers, bays, and sterile mountains, and you have left 40,000,000 of available land of various qualities which may be used for the support of human life.

In a densely peopled country, as in China, for instance, an acre of productive ground properly cultivated is sufficient for the support of a single individual; but allowing five acres to each, it shows that California is capable of supporting in comparative comfort — I mean beyond the probability of starvation—a population of eight millions of the human family.

Cotton can be cultivated as far north as Sacramento, as shown by experiments. El Dorado County has produced it (see Trask's Reports) as white as the driven snow; while that of San Diego has been pronounced equal to the best Sea Island. The tule lands of the State, once looked upon as irreclaimable marshes, will make superior rice-fields, while the rich bottom lands of the southern valleys produce as fragrant tobacco as is grown in Cuba. Our foot-hills, even at an altitude of two thousand feet, produce as fine apples, peaches, grapes, and almonds, as are raised in the world, and in Grass Valley, which is at an altitude eighteen hundred and fifty feet above Sacramento, I can show the curious thrifty fig-trees; though these require a sheltered spot from winter storms.

It is estimated that California is capable of producing not less than 50,000,000 pounds of wool yearly.

As for our mineral riches, beside our gold and silver, we have widely distributed, and in sufficient quantities for practical purposes :—

Copper—In large quantities in the northern counties.

Iron—In Mariposa, Nevada, and Placer, 85 per cent. in richness.

Copperas—Large quantities near Santa Cruz.

Platinum—Diffused very generally throughout the mines.

Chronium—Used in coloring porcelain and in dying, on Nelson's Creek, in Butte County, and other places.

Gypsum—A plaster of Paris, very common.

Nickel—Used in the manufacture of German-silver-ware, is found in quantities in Monterey County.

Porcelain clay—For china-ware ; abundant in Grass Valley, but very general.

Pipe clay—Very fine ; in Grass Valley, and very general.

Arsenical ores—Very common.

Antimony—In Mount Diablo.

Cinnabar, Mercury—Vast quantities ; already an article of export, beside the large amount used by the miners.

Sulphur, Saltpeter—Vast deposits of both in the Coast Range.

Lead, tin.

Bitumen—Or mineral tar, in vast deposits, southern counties.

Coal—In great abundance ; large veins and quite accessible.

Limestone.

Marble—Of excellent qualities ; some most beautifully variegated, and susceptible of exquisite polish, as that of Suisun.

Salt.

Borax—In unlimited quantities, in Napa County.

Alabaster—In Monterey, rivaling the finest Italian.

Buhrstone—For mill stones ; of superior quality.

Our mines, according to the best authority at my command, have yielded in gold, since 1849. inclusive, the enor-

mous sum of $750,000,000—probably more. And who that knows them doubts for a moment their capability of yielding a like sum in the next ten years, with the proper appliances. Manufactures of various kinds have already begun, and can we doubt the capacity of California, with all the means she possesses, of becoming in time a large exporter instead of importer of innumerable articles of commerce, which she now buys with her gold and silver, that are carried away instead of being retained in the State? Does not the contemplation that we actually possess all these minerals, and means of increasing our wealth as a State, fill the mind with emotion at the high destiny which Providence seems to have marked out for us? That sooner or later, under a wise, just, and liberal Government, which will encourage the efforts of our citizens, California will take a prominent rank among the States of the Union, for its manufactures, as it has already done in the world for its mineral treasures? Is she not capable of attaining the high distinction of being among the first, and shall she not improve the talent which Heaven has so bountifully bestowed upon her? Shall the capabilities which she possesses be thrown away, while she makes for herself a barren Sahara in political economy? Forbid it Heaven! Shall we not employ every means in our power to awaken the General Government to a just appreciation of our value to the Union, and leave it no peace till it cast aside the trickery of brawling politicians, and we obtain at once the strong link which will draw us into the folds of the Atlantic States on equal terms, by a much needed, long desired, and indispensable railroad, stretching from New York to San Francisco? From our beginning as a State to the present moment we have been the prey of soulless politicians and speculating sharpers, who have regarded only their individual interests in plucking the State, and who, by anti-railroad movements and steamship monopolies, have retarded our growth and injured our prosperity. Is it not time that these things should end?

There is still another view of the capabilities of California, which can scarcely be called Utopian. In a climate which for salubrity is not excelled by that of any country

on the globe, the developments of the human system, when free from excesses, must be in unison with the surroundings of nature. The pure air of the mountains must have a beneficial effect upon the physical development of man, and with proper training his intellectual faculties must be fully matured, and in time, California will produce her full quota of distinguished men and women. There seems to be something in the climate as well as in the sublime scenery which surrounds us, that excites and fosters literature and science.

The towering and snow-clad mountains excite the organs of sublimity, while our charming lakes and silver streams awaken ideas of the beautiful. Our minerals impel the action of scientific minds, and our position in the world, as being between the eastern and western hemispheres, calls the attention of political economists.

From these deductions may we not draw the inference that in future days California will produce her poets, her statesmen, her philosophers, and literary geniuses, who will earn for themselves a well-deserved fame on the pages of history? Nowhere have I observed in so small a population as ours is at present, so many who desire to walk in the paths of literature and science. It seems as if inspiration was forced upon them by our surroundings, and that it was a relief to vent their feelings in prose or verse, in scientific investigation, or in the study of political economy for the use of the world.

But with all these capabilities, with all in our possession which may gratify ambition and make life happy, it is possible that we may be stranded on hidden sands.

A corrupt Government may blast our dearest hopes, immorality and vice may blight our highest aspirations, selfish and unscrupulous politicians may destroy our surest means for exalted happiness, by passing unequal laws. When men become non-producers, hanging like drones upon society, and gain a preponderance in the affairs of State, or the control in our social circles, spending their time in drinking, gambling, and vice, casting aside all thought of properly applying the means of true greatness

within our reach, what must be the inevitable result? A degraded and time-serving people—a mental Sahara of intellect—a vulgar ambition for trifles, which do not ennoble—a barren vineyard in the midst of a blooming garden—a trouble to ourselves, and a pest to the world.

Shall we permit this beautiful portion of earth to fall to perdition, or shall we adopt in truth our glorious national motto, *E pluribus unum*, in our great cause of expanding the capabilities of our State, of demanding from the parent Government that appreciation which justly is ours, and to make our beloved California a bright star in the national galaxy—honorable in the world, and desirable as an abiding place for life?—*A. Delano*, "*Old Block*," *in S. F. Mirror*, July 26, 1860.

STIRRING THOUGHTS.

CLOSING PORTION OF AN ADDRESS DELIVERED BY REV. M. C. BRIGGS, AT THE COMMENCEMENT EXERCISES OF THE UNIVERSITY OF THE PACIFIC, *July*, 1866.

O, then, young gentlemen, if you are ambitious to become leaders of mankind, consider whether it is the walking-beam that moves the engine, or the engine that moves the walking-beam. You must begin at the bottom and work upward. Go down to the lower strata of society and quicken, and agitate, and elevate the masses. Take upon you the scholar's noblest work; diffuse your rare, true thoughts, and make them common as dew and sunlight. Spread your better knowledge as the Spring spreads beauty. Pour it along the valleys, hang it on the shoulders of the hills, festoon the rocks, awake the dormant life of tree, and bulb, and slumberous seed, kiss barrenness from the face of the desert, and make it rejoice and blossom as the rose. Believe me, congresses and cabinets and courts are nourished by the roots which reach these countless hidden springs. The *character* and *power* of governments have a common origin, inasmuch as both are from the people. The sure way to make the hands move round the dial-face with

order and precision is, to regulate the concealed machinery of the chronometer.

Not to outshine, but to shine out; not to indicate, but to create; not to rise above men, but to raise men above themselves, is the ambition of great and consecrated souls. Curiously enough, that which is the aim of a genuine philanthropy, is the soundest philosophy of reformation and success. It was Jesus who said, "Whosoever will be great among you, let him be your minister. Whosoever will be chief among you, let him be your servant." The noble spirits are they who go down to the basest and lowest of their kind with messages of instruction and hope.

"Voiced like heaven's lark amidst the night of hell" *are* "great" and "chief," greater than conquerors and kings. The work is heroic—it is Christian-like—and it reaches grand and visible results with a comprehensive breadth and certainty unknown to more superficial measures. Raise those fundamental masses a degree in average intelligence and morals, and you carry up all that is above them. Make them better, and by inevitable sequence you make every thing better up to the dome of the Capitol. God never meant that respectability and order and religion and law, should ripple and sparkle and float securely on the surface of a fathomless sea of ignorance and moral pollution. He never meant that the work of salvation should proceed backward and downward. Christ began where those who are content to imitate him must begin—where the reformers of history have all begun—preaching the gospel to the poor. Bend low, and you will lift humanity. Lifting humanity, you carry up all its institutions with it. Such is the great and terrible responsibility of the privileged few for the condition of the unprivileged many. Such is the inexorable rule of remedy for the social and political evils that affect mankind.

To do such a work, you must be ready to accept incapacity, incredulity, misconstruction, and the unscrupulous hostility of every wicked interest which you seek to uproot. Send forth your good thought to encounter the common fate of purifying ministers. They will strip it naked, shoe

it with a peasant's clogs, trick it out fantastically like a clown, pelt it with mud, spit upon it, buffet it, crown it with thorns, crucify it. Be content; if it die, it shall live again. Never contend for the mere fashion and draping of your ideas. Never grow impatient or desponding because you meet with reluctance and unbelief.

"There is more faith in honest doubt,
Believe me, than in half the creeds."

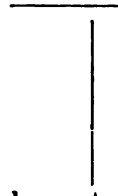
They that fling a blank refusal in your face, will afterward repent and go.

Go down to the substratum, the broad social bed-rock, and work up with a will. Condescend to men of low estate. Enforce good counsel with a blameless life. Suffuse and kindle the life with the auroral beauty and fervid glow of Christ-begotten love. In the lowest human creature recognize a brother, in the weakest a helper, in the most perfidious a friend. A greater than you and I stooped to the helpless and guilty, and when he was lifted up, even upon a cross, he drew all men unto Him. Wait as if there was no working. Work as if there was no waiting. So will you resolve the equation, and complete the circle of a brave, true, and effective life.

"Think truly, and each thought of thine
Shall the world's hunger feed;
Live truly, and thy life shall be
A great and noble creed."

CURIOUS OPTICAL EFFECT.

Two straight lines placed in relation to each other, as indicated in the diagram, *seem* greatly disproportionate in length, although they are exactly equal. We have tried the illusory experiment a hundred times on as many different persons, and they have invariably pronounced the perpendicular line much the longest. We can give no other explanation for this effect



than that the perpendicular line and horizontal line meet in the center of the latter. Will any one give a more satisfactory solution?

AGRICULTURE IN ITALY.

IN geography, climate, and soil, California is often said to resemble Italy. It is probable that hereafter, when this State obtains adequate population, it will present an agricultural system similar in its prominent features to that which exists in that classic land. In a recent number of the New York *Nation*, George P. Marsh, American Minister at Turin, gives some very interesting facts concerning the agricultural progress of Italy. We quote:—

The total continental and insular surface of the kingdom, excluding, of course, the Austro-Italian provinces and the States of the Church, amounts to about sixty-four millions of acres, or one hundred thousand square miles. Upon a rough comparison, then, we may say that the kingdom of Italy is about one and a half times as large as New England, about equal to New York and Pennsylvania taken together, little more than half as large as California, considerably less than half the size of Texas, and but one-twenty-ninth part as extensive as the United States of America.

The great lakes occupy a surface of rather less than half a million of acres. About 925,000 acres are covered with small lakes, shallow pools, and other stagnating waters, more than half of which, it is thought, could be drained with advantage. The extent of originally boggy and marshy lands is estimated at 1,300,000 acres, of which 500,000 have been already reclaimed, and 200,000 are in process of improvement by draining.

The soil devoted to the growth of rice amounts to 450,000 acres. Of these grounds, about two-thirds are flooded at pleasure from perennial streams, the remainder being supplied from reservoirs of rain-water and other sources qualified as "adventitious." It is a fact of interest that not more

than one-tenth part of the rice grounds of Italy lie south of the parallel of forty-four degrees north latitude, while in the United States little rice is grown north of the thirty-fifth degree. In other words, the southern limit of profitable cultivation of this grain in Italy is nine degrees, or 600 miles north of the northern limit of the same branch of agriculture in the United States. This difference is by no means due wholly to climatic causes; for, though the summer temperature of our Atlantic and valley States would not admit much extension of rice culture northward, there is nothing in the climate of Italy to prevent the growth of rice in any part of the peninsula except in the mountainous districts. The cause of the difference lies in the special geographical character of northern, central, and southern Italy, respectively. In the former division there is a far greater extent of gently sloping plain, admitting easy flooding, and therefore suited to the cultivation of rice, than in the two latter, and the Alps and the northern scarp of the Apennines afford much more abundant supplies of water than the middle and southern ridges of the latter chain. Besides, rice culture would be much more prejudicial to health in southern than in northern Italy, and the habits of the population are less favorable to so severe and disagreeable a branch of agricultural industry in the former than in the latter provinces.

The regularly irrigated lands in the Italian kingdom already amount to not less than 3,350,000 acres, or more than 5,200 square miles. The Canal Cavour, now very near completion, will add 250,000 square miles to this quantity, and numerous other canals for the same purpose are in course of construction, or at least projected with prospect of success. It is computed that in Lombardy a proper supply of water increases the annual product of lands by about twenty dollars per acre, at the present prices of agricultural growths. There are few crops which are not irrigated when the means are at hand, and even chestnut, walnut, and forest trees are not unfrequently watered with manifest advantage. In the Alps, irrigation is carried up to the very foot of the glaciers, and on the

southern slope of those mountains water is applied to meadows which lie farther northward than the city of Montreal, and higher than the highest peak of the White Mountains. About half the Italian rice fields are supplied with water by means of artificial canals, often large enough for boats of considerable burden, and furnishing a great amount of power for driving machinery; the residue are flowed by small conduits from rivers, reservoirs, springs, and wells. There is in Italy unquestionably a very great extent of soil valuable for pasturage and the growth of timber, but too rugged and broken in surface for irrigation, and there are large districts which have no means of obtaining sufficient water. There are also regions where, from the constitution of the superficial and the subsoil, from peculiarities of local climate, and from other circumstances, irrigation is neither practiced nor needed, and some of the lands of this description sell at high prices; but, in Italian husbandry generally, water is almost as necessary as solar heat to profitable agriculture. The stimuli of necessity and profit are encouraging great efforts for the extension of the system of irrigation, and in all probability the day is not very far distant when the current of every spring and brook and river in Italy will have been at least once utilized for irrigation, for hydraulic machinery, or for navigation.

A very considerable proportion of the Italian peninsula and islands being covered by barren mountains, and much of the lowlands being so unhealthy as to be scarcely habitable, the amount of land which can be made to produce food for man or for domestic animals, or vegetable growths required for other human use, is relatively small, and the twenty-two millions of souls that compose the population must draw their nourishment from an extent of territory which seems insignificant to eyes familiar with the vast expansion of our own arable soil. Hence, while the wages of the farm-laborer are low, probably not much exceeding, on the average, a franc a day, without board, the price of land is high, and it is only under exceptional circumstances that he who inherits no patrimony can hope to own the

smallest portion of the soil he tills. The landed proprietors of Italy, like those of France, are tenacious of their acres, and sales of real estate are much less common in those countries than in our own, where lands and houses pass from hand to hand almost as readily as personal property. So rare are transfers of land in Italy, in fact, that a stranger can gather from his own observation, or from personal inquiry, very little information as to the current market value of real estate. The report under consideration attempts to give from local returns the average prices of meadow and arable grounds, and, in many cases, of woods, vineyards, heaths, and marshes in each province. The range of discrepancy in price between dry and irrigable land is very great; for, while in some situations pastures or meadows without water are not worth more than twenty, or even ten dollars an acre, there are irrigated lands which command not less than six hundred dollars an acre. I do not refer to market garden grounds in the immediate vicinity of large towns, or vineyards planted with favorite growths, which are sold at fancy prices, but to lands devoted to ordinary cultivation. Besides original character of soil and convenience to high-roads and markets, the value of irrigated lands is much affected by the quality and usual temperature of the water supplied to them. A warm rivulet, which brings down and deposits vegetable slime or enriching mineral substances, may double, or even decuple the price of the land it waters, while cold glacier streams, charged with silicious sediment, add very little to the price of the soil over which they are conducted. So far as the writer of this notice can judge from the returns before him, and from a good deal of inquiry, he thinks that lands of the same relative value as those which compose the bulk of New England and New York farming grounds, are worth in Italy from seventy-five to two hundred and fifty dollars an acre.—*Sacramento Union*, April, 1866.

A HARD-WORKING CALIFORNIA AUTHOR.

THE Old World goes on analyzing, scribbling, fighting, traveling, and talking in this year 1864, as in every year of the last six thousand. There is no "let up" in poetry, science, letters, nor art, and the journalists must display their mimic wares to the world's gossips, thinkers, and long-heads, till the crack of doom. At the same time the German Solomons, with glass of ten thousandfold magnifyings, are scrupulously examining the structure of a butterfly's wing, and pouring over thousands of musty tomes to find the true meaning of a new Sanscrit, Chinese, or Iberian language, or at present consumedly absorbed, as only Teutonics can be, in the study of the very languages of this Alta California and Arizona, as spoken by their aborigines from Behring's Straits to Cape San Lucas. One of the eminent American authors in this latter line, and well known in California from 1851 to 1860, as engaged in public employments in this State, and in Oregon and Washington, is George Gibbes, whose works on the Indian tribes of the Pacific domain, all original essays and investigations, have been several times referred to in the *Bulletin*. In July last, copies were received here of his treatises on the languages of the Clallam and Lummi clans of Puget Sound, published in Shea's series of *Indian Linguistics*, which has now attained its eleventh volume, and is well known in Europe and America as one of unique and recondite merit in philological science. The new volume of Gibbes's consists of some nine hundred words of Clallam and twelve hundred words of Lummi, which will be found of much practical use to the settlers of Puget Sound in their intercourse with the Indians of all those sections, and of Vancouver Island. By this, some three thousand people can be communicated with in their native tongue, even as high up as Fraser River, and with his last year's volume of Chinook-English jargon (one thousand words and phrases), which is a greatly amended and improved treatise of all that had been written

on the subject before, the trader, explorer, and miner is greatly assisted in his objects. Gibbes is known in California letters as the author of valuable notes on the north coast California tribes, while in service with the Indian Superintendent, R. McKee, in his expedition to Mendocino and Klamath, in 1851, published by the Government in Schoolcraft's volumes. In 1862, in connection with Mr. Shea, formerly a Professor in St. John's College, New York, and well known for his excellent histories of the Catholic missions and churches in the United States, Gibbes published a translation from the French of Pandosy's grammar and dictionary of the Yakamas of the Columbia; and he has now going through the press in New York a dictionary of the Nisqually tongue of Puget Sound. Since 1861, he has been employed on a work of extended dimensions on the Indian nations between the Bay of San Francisco and Behring's Straits, including those from the Rocky Mountains to the ocean, for the Smithsonian Institution, and for which his voluminous observations on the Indian tribes of Stevens's railroad exploration of 1853, on the northern line, contained in the first volume of those surveys, and his official services in Campbell's survey of the British Columbia and Nebraska boundary of 1860, amply qualify him. Beside these efforts, he is now collecting material for an ethnological chart of all the Indian races of the Pacific domain, to be published in connection with those of other gentlemen, whose labors will include all Mexico, Central America, and the entire of North America, from Panama to Hudson's Bay. We can, therefore, say that Gibbes is truly a hard-working author, and his works a credit to California.—*San Francicso Bulletin.*

THE VALLEY OF THE AMAZON.

IN A LECTURE BEFORE THE BROOKLYN MERCANTILE LIBRARY ASSOCIATION, PROFESSOR AGASSIZ SAID:

HE Amazon is not a stream; it is a submerged plain, about three thousand miles in length and five hundred to seven hundred miles in width, and entirely occupied by a fresh-water basin, through which the river flows from the Andes to the Atlantic, and which is overgrown by the most luxurious vegetation upon earth. To form an idea of the Amazon we must discard the idea of a sloping valley, in the center of which flows a stream. It is but one extensive plain, even and flat. The slope of the plain or valley of the Amazon does not exceed 240 feet from the borders of Peru to the Atlantic Ocean. It ought rather to be called a fresh-water ocean with innumerable branches pouring into the Atlantic. And so combined is it with the Atlantic that it is difficult to tell where one begins and the other ends. Sailing along the coast, and long before you see any indications of a continent, you are already in the turbid waters of a mighty stream. Thirty miles off the coast you are in it, and as you advance, the blue waters of the ocean disappear, until at last you are in a broad expanse of muddy waters. This is the Amazon. At the point where it meets the ocean it is 150 miles wide. The mass of waters is so great that 2,000 miles above its mouth it contains innumerable islands, forming one great system, rendering it difficult to tell which channel constitutes the river. One of the islands (Marajo) at the lower extremity of the Amazon is half as large as Ireland, and a channel of the river on one side of this island is so wide that in sailing up it you can not see either shore. You sail up the Amazon 1,200 miles before it has the appearance of a channel, with banks indicating that it is a river. The tide of the ocean is felt 400 miles above the city of Para. The tributaries of the Amazon are as colossal in their character as the river itself. From Para to the borders of Peru is 2,000 miles, and at the

borders of Peru the Amazon has tributaries which may be navigated by the largest vessels for five hundred miles above the point where they intersect the Amazon. The Amazon flows from west to east in nearly the same latitude and nearly under the equator. The tributaries that intersect it on the northern bank are swollen different seasons from those that intersect it on the south bank, owing to the different months in which the rainy season occurs in the regions through which they flow, so that when the northern tributaries are swollen by the rains the southern are low. The consequence of this is that the main channel of the Amazon is shifted from right to left at different seasons a distance of eighty miles. The whole of this immense plain or valley of the Amazon is one uninterrupted forest, and so dense is the vegetation that it may be said to be impenetrable. The vegetation seems to arise out of the water. Scarcely anywhere in this valley are hills or mountains to be seen—the highest is not over one thousand feet. All of them have flat tops, presenting a very remarkable appearance. The lecturer said he was curious to ascertain the origin of these hills, and visited many of them for that purpose. He found them composed mostly of gravel and sand deposited in strata, and he became satisfied that they were once far more numerous and extensive, and occupied no inconsiderable portion of the valley. There was no other way of explaining these hills than on the theory that the water was at one time so high as to cover them, and had gradually fallen away, leaving the hills, which had been deposited under the water, standing. Thus the whole basin of the Amazon, three thousand miles long and from five hundred to seven hundred miles wide, was once flooded with water. He considered these hills as standing witnesses to the fact that extensive fields of ice and glaciers once occupied the region of Brazil and the tropics, which showed what changes had taken place between a comparatively recent date and the present time. But to return to the Amazon and its general aspect. The vegetation of the Amazonian region consisted in part of tropical forests, which, unlike our forests, did not contain clusters of the same family, but

groups of various trees. There was not an oak, maple, elm, or poplar in the valley of the Amazon, nor a plant allied to those which form our forests.

There were remarkable specimens of trees which belonged to the same family as the locust, one of the peculiarities of which was to have leaves that are not simple, but along which are lateral leaflets. The myrtle, which was a small shrub here, performed an important function in that region, furnishing a variety of fruit as diverse, luscious, pleasant, and refreshing as those of the family to which our rose belonged with us—the pear, cherry, apricot, peach, plum, and almond. The great Brazilian chestnut was the first of that family. Its fruit was about the size of two fists, contained a number of triangular nuts, and the tree itself—one of the colossi of the forests of Brazil—grew to a height of one hundred and eighty or two hundred feet. Others allied to it bore fruit of still larger dimensions, some of which were known as "monkeys' spoons" and "monkeys' hats," and these represented, as it were, the almonds of the rose-bush family. Then there was the guava, also one of the representatives of the myrtle family. Its fruit was not unlike the quince. There was, too, a variety of plum and cherry-like fruits to be found. Let us now advance a step further in describing the aspect of the forests in these tropical regions. A remarkable feature of the forests of the Amazon was the immense number of vines and parasitical plants that were seen clinging to the trees and interlacing all their branches. So dense do they make the forest that it is almost impossible to penetrate it outside of the Indian trails. And then the beauty and regularity of these vines and parasites was one of the most charming features of the scenery. It will be forever impossible to build roads in the valley of the Amazon. The natural roads are already built, and they consist of the innumerable streams of water that ramify the whole country, and which can be traversed by steam or sail. The present population of this valley is only 250,000, including Indians, Europeans, and Americans. It is one of the most beautiful countries—healthy, rich, and productive—and he should not wonder

if the time came when it would be inhabited by 25,000,000 people. At present, however, it was given over to an indolent race who could never appreciate its beauties or develop its wealth. He desired to correct a prevailing notion that because this country lay in the tropics it must therefore be unhealthy. It was generally supposed to be hot, malarious, and sickly, but it was not so. The trade winds sent forth a constant gentle breeze through the whole year. Except in the middle of the day, the temperature was never oppressively hot. The usual temperature was eighty-four degrees, and it seldom reached ninety degrees. The nights were always cool. The fevers that prevail in some places came not from the climate, but from the habits of the people, who do not take proper care of themselves. Where the climate is warm it is not uncomfortable to be wet, and people will allow their clothing to get wet through and become dry upon them, and if they are seized with fever the climate is the cause. Those who were wiser undressed before a rain storm and dressed afterward, and in that way avoided a bath in their clothing. [A laugh.] All the rich productions which our country obtain from this region come from the forests. India rubber is obtained from a wild tree which everybody taps. The gatherers of india rubber go into the forest and sleep upon the wet ground, and live upon badly prepared fish, and when they get malarious diseases it is the climate and not their way of life which is charged with being the cause. Prof. Agassiz was satisfied that fortunes could be acquired in the valley of the Amazon with comparatively small labor. With regard to timber, he had seen on exhibition at Para, one hundred and seventeen kinds of costly timber, some of them of the most beautiful grain, which had been cut down from a piece of ground half a mile square. He had himself brought home a mere accidental collection of over three hundred different kinds collected in the valley of the Amazon—accidental, because botany was not the object of his survey. What was true of timber was equally true of textile fabrics, was equally true of the various kinds of fruit which might be prepared and made to contribute to the comforts and luxuries of life.

So, if that country could be settled by an enterprising population he had no doubt it would rapidly rise to wealth and prosperity; and until that time arrived let those who would enjoy the stillness and grandeur of nature ascend the Amazon a couple of thousand miles. It can be done with as much ease and comfort as you can ascend the Rhine. Good steamers ascend to the borders of Peru once or twice a month, and every comfort is afforded the traveler. Ladies especially should take the trip, and in the luxurious shades of the Amazon avoid the dogdays of our northern climate. It was only by going there that impressions could be gained of the grandeur and beauty of nature such as no pen or tongue could portray.

MONO LAKE—THE DEAD SEA OF CALIFORNIA.

E find a very well written and doubtless correct description of this body of water and the adjacent scenery in the *Sonora Democrat.* The waters of the lake and the surrounding country are not unlike those in the region of the Dead Sea in Palestine, and will be regarded among the curiosities of California.—*Sacramento Union*, November, 1859.

A curious theme for investigation is presented in Mono Lake, which, being surrounded by volcanic mountains, appears to be the depressed crater of a volcano filled with water. This lake has in its center two islands, one of which appears to be a long ridge of white lava, and the other a black, well defined crater rising some fifty feet above the surface of the water. The first is called on some maps Grand Island, and the last Beauty Island.

As in other alkaline regions, the traveler in the vicinity of this lake is affected by constant illusions. When he first sees its waters from the mountains north of Monoville they appear right at his feet, and he doubts not but a few moments' walk will take him to their shores; but his patience is overcome as he travels on, and finds the dis-

tance to be a long seven miles. From every point from which the lake is visible, whether from the distance of seven or twenty miles, still it appears to be close by you. This body of water looks to be one or two miles in diameter, but in passing around its circumference to the starting point you pass over a distance of ninety miles. The diameter of the lake is, therefore, thirty miles, giving a superficial area of 675 square miles.

The two islands above noticed appear to be close to the shore you approach, but as you proceed up the lake on the west or east side, they seem to follow your steps until fifteen or twenty miles are passed over, when they are slowly left in the rear. A gentleman residing in Sonora, Major Patrick, assisted a few months since in constructing a boat to visit these islands, believing a trip to them would prove to be a short pleasure excursion. But the enterprise lost much of its attraction by the fact that the boat was rowed twenty miles before reaching the nearer one of them.

This lake and the region surrounding it come as near to the fictions of enchantment as any other known realities. The illusions of distance and other phenomena, presently to be noticed, will convince any one of this fact.

Though its waters are insufferably alkaline, yet the margins of the lake, whereon the sun exerts its generating influence, produce millions of indigenous flies, on which and on their *larvæ* and *pupæ*, ducks, hogs, and Indians are sustained and fattened. Even a real Christian told me when he was there that he had eaten the worm (pupa), and found it very palatable, it "tasting very much like sardines." Not a fish, however, nor frog, nor other living thing, except the flies in question, lives *within* these waters. In fact, the lake is appropriately named, for instead of confining the attention to the meaning of the Spanish adjective *mono*, as I did last week, I would take the original Greek word *monos*, which means, moreover, "deserted, forsaken." Even good water-dogs will never enter for the second time this lake to bring out the killed or wounded ducks; it is truly a "deserted lake."

The ducks are found only around the mouths of fresh water streams, three of which fall into the western side of the lake. At one place, also on the west side, about one hundred yards from the land, a fresh-water spring boils up from the bottom of the lake, presenting a convex surface of water. Here the ducks congregate in thousands, laving themselves, struggling and sporting in this fresh fountain as it bursts through the bitter, lacustrine fluid.

As indicated by the shores, very little rise ever occurs in the waters of this lake. The evaporation from so large a surface, and in so dry a climate, disposes constantly of all the supplies of water of which it is the recipient. Beside the three large creeks emptying into the west side, McLean's River empties into the north and Crosby's River into the south side. Moreover, thousands of springs and rivulets all around the lake are busy in contributing their supplies to this singular body of water. The water is transparent, and when closely inspected it appears as if infused with clear oil. The surface of the lake is generally smooth, though here and there, over its vast extent, ripples may be seen curling and playing in the strong breeze. There is rarely any thing like a wave on its surface, as its oily nature prevents any friction of the wind.

The flies above noticed are amphibious. Two and three feet under water they are seen clustered on stones; and, rising to the surface, they sport awhile in the air and on the water, going down into it with the same freedom as they came out. These flies are classed, I believe, with the insects known as the *neuroptera* (or nerve wing), and their family or species is called *ephemeridæ*. They exist in the *larva* and *pupa* conditions for two or three years in the water; but after progressing to the *imago*, or perfect form, they immediately fill their function of propagation and "die, leaving the ground covered to such a thickness as to make it worth while to cart them away for manure." (*Vide* Reese's Zoology, pp. 33-4). However, the flies which are generated around the borders of Mono Lake, prove to be, as above said, an excellent article for animal subsistence. Millions of ducks become as fat as butter on this food; the Indians

who feed on them look as fine as if they luxuriated constantly on the savory viands of our fashionable restaurants; the hogs kept on the borders of the lake to feed on these flies become exceedingly fat; and indeed it is not unreasonable to suppose that the miners and others who settle there may yet adopt them as an article of diet in preference to "sardines" and costly luxuries. But this subject of flies and their metamorphosis, classification, &c., must be left for the study of the competent entomologist.

The shores of this lake, and the vegetable matter in their vicinity, are frosted over with an efflorescence of snowy alkali. It is said this substance renders bread very light and delightful. It is probable that this alkali is simply the sulphate of soda, as it possesses a cooling, nauseous, and bitter taste. Moreover, the water of the lake contains, doubtless, sulphur in solution. Its smell indicates this. I have submitted a bottle of this water to our distinguished citizen, Dr. Snell, who will in due time correctly analyze it.

Mono Lake belongs doubtless to that great system of soda, alkaline, and sulphur lakes found east of the Sierra Nevada Mountains, in what is called the Great Basin region. Like all those lakes it has no outlet, and it is surrounded by "wide-spread traces of volcanoism," such as extinct craters, hot springs, disrupted mountains, and a burnt, sterile soil. Its shores are covered or thickly paved with rounded basaltic and felspathic stones. No silicious gravel or sand occurs there, the silex having been dissolved by the alkaline lake water.

Mono Lake is more literally a "dead sea" than the sea of Sodom. According to Dr. Clarke, that "sea swarms with fishes, and shells abound on its shores." Mono Lake has neither. The extreme length and breadth of the Dead Sea, according to Mariti, are 75 by 16 miles, giving a superficial area of 600 square miles. Whereas, Mono Lake contains 675 square miles. The rivers Jordan and Arnon, and the brook Kidron, beside many rivulets, empty into the Dead Sea. Into Mono Lake, McLane's River falls from the north, and Crosby's River from the south, and three large brooks or creeks fall into it from the west, beside numerous rivulets and springs

all around its borders. But this lake not only responds to the Greek epithet *monos*, as being "alone, solitary, deserted, forsaken," but it also answers to the same adjective as explained in the Spanish as being "pretty, nice, neat." The lake takes as many shapes as the points differ from which you view it. From the west side, about ten miles from its northern limit, it appears like a beautiful crescent, its horns curving delicately around you on the right and left. From the north, it appears to be nearly circular, like the full moon, the islands in its waters strikingly representing the clouded spots on that planet. From the east, it appears to have no particular shape, but it stretches off irregularly among the mountains. But from all these points you see the whole lake, and it appears to be only a small body of water, no more than one or two miles in diameter. Wherever springs and streams favor vegetation around the valley of this lake, you will find patches of grazing grounds, the grass being mostly coarse and wiry, but said to be nutritious. The predominating vegetation, however, all over this cold, sterile region is sage-brush.

There is little or no echo around this lake, and indeed it is difficult to understand a person talking at a little distance. A dreamy, spell-like spirit seems to pervade the atmosphere. The smooth, glassy surface of the waters, the upheaved, disrupted volcanic mountains surrounding the lake, looking down, as it were, into this abyss of their ejection; the illusions of vision and the whitened shores, thickly columned in many places with vesicular lava, which looks like monuments erected to the "mighty dead," all conspire to impress the mind with the idea of a fictitious scene portrayed by the pencil of an omnipotent hand.

J. R. V.

AN ANNIVERSARY.

From the Alta Californian, Feb. 28, 1859.

LET this day not pass by into the great ocean of time, and be numbered among those that were, unnoticed, for it is an anniversary worthy of some emphatic testimonial of observance at the hands of this people. On this day, just ten years ago, the first wave of the immigration from the older States, moved by the common impulse imparted to hundreds of thousands of our fellow-countrymen, as well as other of the world's people, reached these shores and began the work of building up a majestic empire of free men, upon the outmost western verge of the continent. It is the anniversary of the arrival of the steamer *California* in the harbor of San Francisco just ten years ago, with her load of living freight, whose names are recorded in another column.

Of a truth it may be said of them, they were the pioneers in the establishment of a new State upon this side of the continent. Others had preceded them, who had been moved by different impulses to seek out a new home here, and who perhaps may better be entitled to wear the honorable appellation of pioneers, from having sought this land under none of those excitable and selfish motives, if we please to call them so, which the subsequent discovery of gold created in the minds of so many thousands. Theirs are, however, honors that belong to them alone, and which we would not, knowingly, seek to deprive them of. We are writing now only of that great march of empire that, in a few brief months, took up its majestic way along the trackless ocean, over broad deserts and across forbidding mountains, through malarious jungles and tropical swamps, braving disease, hardship, and perils of every kind, on its final destination to these auriferous shores—that tide of population that had its origin and its growth,

> "As when the wind, ascending by degrees,
> Disturbs the whitening surface of the seas,

The billows float in order to the shore,
The wave behind rolls on the wave before,
'Till, with the growing storm the deeps arise,
Foam o'er the rocks, and thunder to the skies."

So began the process of populating this great and powerful State, ten years ago to-day, when the *California* came to an anchor in the Bay of San Francisco; so did it grow and swell into a vast and mighty multitude, outvieing all that the world had e'er before witnessed, in the splendid and imposing results which followed; and is it too much to say, all that will e'er again be beheld of a similar character, throughout the long vista of coming time!

More than three hundred souls, who had for months pursued their trackless way along the mighty deeps, ten years ago to-day, first stepped foot upon the sand beach that lay along in front of the little hamlet of Yerba Buena, constituting the vanguard of an army of free and industrious people, who came, not as conquerors to overrun, lay waste, pillage and spoil the land, but to build up a new empire upon a foundation of enterprise and freedom, to rear aloft a commonwealth that was destined, in its future connection with, and relation toward the world, to wield a golden scepter, potent and powerful in guiding and controlling the tide of commercial intercourse between all the great nations of the earth.

There are few among us—claiming to be old residents of California—who will not recognize in the list comprising this band of early comers many a familiar name, which we do now, or have at one time, numbered among our fellow-citizens. True it is, that theirs has been the common lot of the masses who were among the pioneers of California, and time has been busy with them, as with us, working changes which we will not attempt to follow, adding blessings and misfortunes alike, with the same unpitying and indiscriminate distribution, the full share of which is allotted to mankind all alike, over the wide, wide world, whithersoever we may go, in chase of fame and fortune. Ten years ago, on this auspicious day, the good steamer first parted with her sharp prow the glistening water that slept in the morn-

ing sunlight within the two walls that comprise the Golden Gate. Ask of one whom you may meet in your walks upon the street to-day, who belonged to this band, and he will tell you with what feelings of ambitious hope and joy he first gazed upon the stars and stripes that floated over the barracks of the Presidio—nestled in the little green nook upon the right, as the steamer passed on up toward the spot now occupied by a great and populous city. He will tell you what feelings of grateful emotion that flag inspired, and how eloquently it spoke to him of home and the fatherland. Spring, as now, had then mantled the hills with her emerald tapestry. The deer, and the herds of the thrifty rancheros, enjoyed a joint occupancy of their slopes, and of the valleys, and nibbled the tender blades of the upspringing grass unmolested and undisturbed, where now farms and well cultivated fields lie spread out in the sunlight, like the rich mosaic handiwork of oriental nations.

We need not dwell upon the vast changes which time since then has wrought in this prosperous land, for truly do "we spend our years as a tale that is told," and with this tale all are familiar. With its closing period is completed the first decade of years, numbering from that grand epoch in the world's history from which dates the so-called "gold excitement" that resulted in peopling California, and made, in a few brief months, a great and prosperous State out of a previously but little known and sparsely populated territory, that had for centuries slept in waste and solitude, bearing in its bosom wealth enough to have laden all the ships of Tarshish ten thousand times over, yet undiscovered and unknown, kept from the knowledge of mankind until the allotted time appointed by an all-wise God, doubtless with a special and blessed purpose.

"The days of our years are threescore and ten; and if by reason of strength they be fourscore years, yet is their strength labor and sorrow; for it is soon cut off and we fly away." Thus, according to the words of the Psalmist, has passed away, a wide period of an existence, during this decade of years which the dawning of this day completes. It has brought with it care, sorrow, and tribulation for most

of us all, as well as for those who first set foot upon these shores ten years ago to-day—it has given happiness unalloyed to none. If we take this band of early comers as a type of those who succeeded them, all upon the same common errand—the acquisition of fortune and happiness—we shall find, as their good and evil fortunes have been, so, too, have been our own. The grim Reaper with his relentless sickle, has not been more busy with them than with us, nor has their lot been more varied, and deeper tinted with misfortune and bitterness than our own.

As they have been, so we, too, are crowned with these years of hope, fear, joy, misfortune, and the thousand and one mixed experiences of California life; so we, too, may profit if we will, by the lesson which this anniversary affords.

While, therefore, we contemplate with a just pride and pleasure, the proud empire of civil and religious liberty, which we have, during this period, so firmly established upon these shores, let us not forget how rapid has been this flight of time, and how much of misfortune has fallen from its wings upon us all, because of our own errors, in the pathway along which we chose to wend our way, during so much of existence as is comprised in the decade just closed.

ORIGIN OF THE WESTERN PRAIRIES.

M. Leo Losquereus, the well-known geologist, who has carefully studied the prairies of the Mississippi valley, ascribes their general formation to the agency of water. He says:—

"All the prairies still in a state of formation along the great lakes of the north are nothing else but marshes slowly passing to dry land by slow recession of water. When land is continually covered by low stagnant water, its only vegetation is that of the rushes and of the sedges. When the same land is alternately subjected to long inundations and to dryness, during some months of the year, the same plants continue to cover it. By their decomposition these

marshy plants produce a peculiar ground, either black, light, permeable when it is mixed with sand, as it is near the borders of the lakes, or hard, cold, impermeable when it is mixed with clay or muddy alluvium, as in some marshes underlaid by shales or clay, or along the banks of some rivers. Land continually covered with stagnant water can not produce any trees, because the trees require for their growth, like most of the terrestrial plants, the introduction of atmospheric air to their roots. Neither do trees germinate and grow on a ground alternately covered with stagnant water and exposed to dryness for some months of the year. From these considerations, the law of the general formation of prairies can be deduced. While a land or part of country is slowly passing from the state of swamp or marsh to the state of dry land, the annual alternation of stagnant water and dryness causes vegetation of peculiar plants, which, by their decomposition, form a peculiar soil unfavorable to the growth of the trees. From this general rule of formation, which regards only the prairies of the Mississippi valley, all the different phenomena or peculiar appearances of the prairies can be easily explained.

THE PIONEER OVERLANDERS OF 1841.

CORRESPONDENT sends us a list of the first regular emigration to California of 1841, and we are assured it is the fullest which has yet appeared in print. This enterprise occasioned at the time much excitement on the Missouri frontiers, and accounts of it were published in several of the Western journals, as it was then considered a great undertaking to cross the Rocky Mountains and explore a new road through the snowy ranges and howling deserts south of the Columbia, the only well-ascertained points being the Great Salt Lake and the mystical St. Mary's, now Humboldt River, so called afterward by Fre-

OVERLANDERS' FIRST GLIMPSE OF THE SIERRAS.

mont. An interesting sketch of this 1841 adventure appeared a few months after in Chambers's Edinburgh *Magazine*, which seems to have been written by some one well acquainted with all the particulars, and who foretold the effects on the future prospects of California. At the period of these important events, the Western people were much excited by the different works written by Dr. Gregg on New Mexico, and Washington Irving on the explorations and tradings of Astor's fur trappers, and on those of Capt. Bonneville in the Rocky Mountains, the results of which were this emigration to California, and several months after that, to Oregon, and also from Texas to Santa Fé. Our correspondent says: I have just received the following information from Albert G. Toomes, now of Tehama, who formerly lived at Monterey, and is well known in that town, where he resided from 1842 to 1851 :—

I sat down with my old partner Thomas a few days ago and got talking of old times in California, and all that sort of thing. It occurred to us to make a list of our ancient companions in the hard journey we made from Independence a long twenty-seven years ago, and, Sandy, our hairs are getting gray, and we often remember those blessed old *bailies* and *merianders* of gay Monterey. I claim that we were the first regular emigrants who ever started from the States to California, as those who arrived in the country before us, dropped in by mere chance, as old trappers, whalemen, and sailors from the islands and Boston ships. Our party was divided into two companies, who left Independence on the 6th of May, 1841, and we got into California on the 10th November of the same year. The first company was headed by Robert H. Thomes, who crossed over by the way of Salt Lake, and the second was headed by William Workman, who went by the way of Santa Fé and the middle route to Los Angeles; and both got into the country at nearly the same time.

We were all armed with rifles, and mounted on horseback, and had literally to smell our way every day of that long, hard journey of 176 days; but we arrived all safe and hearty, and nearly every one of the immigrants mentioned

have either died in the State or still reside here. But I never want to cross those hard deserts and big mountains again, except on the railroad, and you bet I shall run over to old Pike on the 4th of July, 1870-car, or mayhap on those of 1869, as I hate salt-water sailing. I have mentioned in subjoined lists those of many "foreigners," then so called, who lived in California before my time, but several have escaped me, as I have never seen a proper list of the names of the first immigration. You know, when Thomes and self got our ranchos up here from Michelteren o and Jimena, this place was out of the world, and league farms to be had for the asking, but it is quite different now. The Indians, once so numerous, are all gone, and the rail cars will soon rush by our doors, and land is worth $20 per acre. That house we built in Monterey for Governor Jimena in 1845, was one of the best jobs we ever did in our lives, for the old gentleman not only paid us well, but got us our farms without any of the trouble others had. Here is the list of our old friends:—

Pioneer Companies by the Overland route of the Mary's, Ogden or Humboldt River, in 1841.—In company No. 1—Robert H. Thomes, now of Tehama; Mr. Bartlett, Joseph Childs, Maj. Rickman, Talbot H. Greene, Josiah Belden of San Jose; Charles Webber of Stockton; Henry Hubert, John Bidwell of Chico; Charles Flugge, Mr. Barnet, Mr. Brolasky, Charles Hopper, Grove Cook, Benjamin Kelsey, Andrew Kelsey, Mr. Kelsey, all of Sonoma; Mr. Henshaw, James McMahon, Nelson McMahon, Mr. Patten, Mr. Dawson and brother, Mr. Chandler, Michael Nye, Mr. Walton, Mr. Swartz, Mr. Jones, James Littlejohn.

In company No. 2, of 1841.—William Workman, John Roland and Benito D. Wilson of Los Angeles, Albert G. Toomes of Tehama, William Knight, William Gordon, William Moore, Isaac Given, Frank Given, Mr. Pickman, Frederick Bachelor, Mr. Teabo, Frenchman, Wade Hampton, Dr. Meade, Dr. Gamble, Hiram Taylor, Mr. Lindsay, Col. McClure.

There were three or four others in these two companies whose names I have now forgotten, and many on the list

are still living in the State. We suffered great hardships, and got into very tight pinches for food and water, but we made up for it when we got among the fat beef and venison of California.

In the company which came across in 1843 were Maj. P. B. Reading, Maj. S. J. Hensley of San Jose, Maj. Jacob R. Snyder of Sonoma, Wm. Blackburn of Santa Cruz, James and John Williams, Isaac Williams of Los Angeles, and two others whose names I have forgotten. This company crossed over the Pitt River Mountains and came down the Sacramento valley to Sutter's Fort, and their history is better known than ours.

When I arrived on the coast, in 1841, I found living in different parts of the country the following old American and foreign settlers:—

In Los Angeles.—John Temple, Abel Stearnes, William Carpenter, Richard Lochlin, Mr. Vignes, William Wolfskill, John J. Warner, Mr. Williams, and Stewart and Sam, two American colored men; and really it was a good thing to see a darkey once more, as in old Missouri.

At Monterey.—Thomas O. Larkin, David Spence, John B. R. Cooper, James Watson, William E. Hartnell, George Kinlock and wife, George Allen, James Stokes, William Watts, Earnest Romio from Germany, William Foxson, Mr. McVicker, William E. Garney, James Meadows and James McKinley.

At Santa Cruz.—Isaac Graham, Henry Nail, Job F. Dye, now of Idaho; William G. Chard, Jacob Majors, Peter Lassen, John Sinclair, Mr. Dickey, and several others I have now forgotten.

At Yerba Buena or San Francisco.—Mr. Ray and wife, of the Hudson Bay Company; Hickley & Spear, merchants; Teal & Titcomb, merchants; Sherreback & Voiget, of the hotel; William H. Davis and Daniel Sill; —— Davis, blacksmith; —— Andrews, carpenter; Robert Ridley, John Coppinger, Eliab Grimes and Mr. Johnson.

At San Barbara.—Daniel E. Hill, Lewis Burton, Ziba F. Branch, Isaac Sparks, A. B. Thompson, Thomas Robins, Nicholas A. Den and Alfred Robinson.

At San Diego.—William Shooks.

At Sonoma and the Bay.—Jacob P. Leese, Victor Prudhom and George Yount of Napa.

W. D. M. Howard and Joseph P. Thompson of San Francisco, I believe, were after my arrival one or two years. Besides, these were W. A. Richardson of Saucelito, John Gilroy and David Littlejohn, who had lived in the country many years, and our well known old friend Capt. John A. Sutter.—*S. F. Bulletin*, July 27, 1868.

A DROVE OF "BULLS."

THE following piece of "composition" may be "backed" against any thing ever produced. It was written half a century ago, by Sir Boyle Roche, a member of the Irish Parliament, in the troublous times of "'Ninety-eight," when a handful of men, from the county of Wexford, struck terror into the hearts of many a gallant son of Mars, as well as the worthy writer himself.

"MY DEAR SIR:—Having now a little peace and quietness, I sit down to inform you of the dreadful bustle and confusion we are all in from these bloodthirsty rebels, most of whom are—thank God!—killed and dispersed. We are in a pretty mess, can get nothing to eat, nor any wine to drink, except whisky; and when we sit down to dinner, we are obliged to keep both hands armed. While I write this, I hold a sword in each hand, and a pistol in the other.

"I concluded from the beginning that this would be the end of it, and I see I was right, for it is not half over yet. At present there are such goings-on, that every thing is at a stand-still. I should have answered your letter a fortnight ago; but I did not receive it until this morning. Indeed, scarcely a mail arrives safe without being robbed. No longer ago than yesterday, the coach with the mails from Dublin, was robbed near this town. The bags had been judiciously left behind, for fear of accident; and by good

luck there was nobody in it but two outside passengers, who had nothing for the thieves to take. Last Thursday notice was given that a gang of rebels was advancing under the French standard, but they had no colors, nor any drums except bagpipes.

"Immediately every man in the place, including women and children, ran out to meet them. We soon found our force much too little; we were too near to think of retreating. Death was in every face, but to it we went, and by the time half of our little party were killed, we began to be all alive again. Fortunately, the rebels had no guns, except pistols and pikes, and as we had plenty of muskets and ammunition, we put them all to the sword. Not a soul of them escaped, except some that were drowned in an adjacent bog; and in a very short time nothing was heard but silence. Their uniforms were all different colors, but mostly green. After the action we went to rummage a sort of camp, which they had left behind them. All we found was a few pikes without heads, a parcel of empty bottles full of water, and a bundle of French commissions filled with Irish names. Troops are now stationed all round the country, which exactly squares with my ideas. I have only time to add, that I am in great haste.

"P. S.—If you do not receive this, of course it must have miscarried, therefore you must write to let me know!"—*Harper's Magazine.*

PROFESSOR LEONARD'S ESSAY ON MATHEMATICS.

THE following able essay, by Professor C. T. Leonard, teacher of mathematics in the Boys' High School of this city, was read before the State Teachers' Institute, in this city, and is now published by request.

MATHEMATICS.

The subject I have chosen as the basis of my remarks is

mathematics—a subject which comprehends one of the most extensive and important departments of human knowledge. By most people it is considered also as one of the most difficult departments; and it is much to be regretted that many, with time and talents equal to the task, are deterred from entering upon a study which would amply repay the expenditure of both, by this mistaken prejudice. Every science, no doubt, has its hard and knotty points; and in no intellectual pursuit can distinction be attained without labor, thought, and perseverance. Yet, if there be one subject of scientific inquiry which, more than any other, is distinguished by the simplicity, certainty, and obviousness of its fundamental principles—by the irresistible evidence by which position after position is established, and by the systematic gradations by which layer after layer of the intellectual structure is completed—that subject is pre-eminently mathematics. In other topics of research there is generally more or less of hypothesis or conjecture; there are obscure recesses into which the light of truth and demonstration can not penetrate, and where fancy and imagination are sometimes permitted to guide our steps. But there are no perplexities of this kind in mathematics, no ingenious theories to mislead, and no conflicting opinions to bewilder. Our progress here is exclusively under the unerring direction of Truth herself; and it is her torch alone that lights up our path.

Whether we consider the subject of mathematics in reference to its practical utility, in its application to most of the arts, or as a powerful, and the only adequate instrument of investigation in the study of several classes of physical phenomena, or as an efficient instrument of intellectual culture, or merely in reference to the numerous and striking abstract truths which it makes known, it must, without hesitation, be admitted to be worthy of a prominent place in every course of liberal education. Mathematical science investigates the various relations of measurable quantity, as space, time, force, motion, and velocity. Our knowledge of the objects of mathematics is obtained from experience, and its axiomatic principles are necessarily involved in our

conceptions of these objects. Although the definitions of many of these are not necessarily confined to a single property, still, every definition must express some characteristic property, and it can not, therefore, be arbitrary. Theoretical geometry treats of the properties of magnitudes, and practical geometry of their construction.

There are three kinds of magnitudes—of one, two, and three dimensions respectively—as lines, surfaces, and solids. Our conceptions of magnitude and of space generally, are arrived at by first acquiring a knowledge of a body by experience, and by a subsequent process of abstraction. If we abstract from any body all the properties of the matter composing it, as its hardness, color, weight, and so on, and retain merely its quality of extension in three dimensions of length, breadth, and thickness, we have then a strict conception of a geometrical solid, which possesses none of the properties of matter except extension, and can not therefore possess a material existence. It is a different object from the space which it occupies; for, in any limited portion of space, an indefinite number of such solids may exist, the one encompassing the other. Abstract now from any solid its thickness, and we then form the conception of a surface having only length and breadth. And if from a surface one of its dimensions be abstracted, as its breadth, we have then the idea of a line, which possesses only length. The intersection of two such lines is a point, which only marks position, and has neither length, breadth, or thickness. It has been objected to this view of a mathematical point, that as it has no magnitude, it can have no existence. It has certainly no material existence, but its existence is no less real on that account. Even a line or a surface occupies no portion of space. No number of points, however great, can fill any assignable portion of space, however small. And it has been remarked, that even a solid does not occupy exclusively any portion of space. They would exist independently of matter, but their existence is no less positive, though immaterial.

A system of geometry proceeds from simple, axiomatic, and incontrovertible principles, to the demonstration of new truths; and from the combination of truths previously

known, new truths are continually evolved, and thus a system of geometrical science is established by a continued process of logical deduction. Some of the elementary truths in geometry are so obvious as to be almost self-evident; but many of them are of a different character, and are striking, and even beautiful, at least when the mind is habituated to contemplate abstract truth. Several propositions are, in some of their cases, axiomatic, but in other cases they require to be demonstrated. Without this distinction the demonstrations of certain propositions would appear to be unnecessary; and in such instances they are perhaps more useful in completely obviating objections than in producing conviction.

As regards the utility of the mathematics, it must be admitted that our knowledge has been greatly extended by its means. Independently of the innumerable important and striking properties of magnitudes and relations of abstract quantities that it has made known, and which can be sufficiently appreciated only by the mathematician, it has unfolded a very extensive range of natural phenomena. It has investigated the principles of theoretical mechanics; the laws of the equilibrium and motion of fluids, fixed and elastic; the principles of optics or the science of vision, of electricity and of magnetism; the theory of the propagation of sound and of light, and a variety of other subjects. But even the most abstruse branches, that appear to be incapable of any useful application, ought not to be neglected; for they may be applied at some future period, like the ancient doctrine of the conic sections, which for twenty centuries was an object of mere curious speculation, till it became, in the hands of Newton, an efficient means of unfolding the planetary motions. Without the aid of rules derived from mathematical science, the navigator, relying only on his compass as a guide, could not with safety venture to any considerable distance on his element, intercourse with transmarine nations would be impossible; and, consequently, our knowledge of the globe which we inhabit would be very limited. We should probably still believe that its surface is an extended plane, and that it is supported on

pillars; or, as was the opinion of some of the ancient philosophers, that its figure is cylindrical, like a drum. Without the aid of this science, our knowledge of celestial objects would be still more imperfect, and the consequence of our ignorance still more striking. We should still believe that these objects are equally distant from us, and, very probably, that they are distributed on the surface of an extensive crystalline sphere, performing a diurnal rotation about the earth, as the center of the universe. We should also believe that some celestial phenomena, as eclipses and comets, are signs of the conflict of the elements of nature, or that they are portents of the wrath of Heaven, while contemplating to inflict on man some dire calamity, such as war, famine, or pestilence. How different from these unsatisfactory and incoherent conjectures is that great achievement of this science—the clear and satisfactory exposition, on the most incontrovertible principles, of the complex, though sublime and systematic mechanism of the heavens, by which the distances and magnitudes of the sun and planets have been measured, and also their weights, and even those of their satellites, ascertained, and by which the masses and distances of some of the stars or suns of other systems, though inconceivably remote, even in comparison with the great extent of our own system, will probably ere long be determined. The practical utility of mathematics is so well known and so universally admitted, that on this topic it will not be necessary to make many remarks. Let it suffice to call to mind that from its principles the rules of calculation and measurement are derived. It supplies the art of measuring distances, heights, surfaces, and solids, in artificers' work, gauging, land and marine surveying; it furnishes the principles of calculation in navigation, nautical and practical astronomy, of the arts of the optician and the machinist, and also of the arts of carpentry and engineering, both civil and military. On its deductions also depend the arts of planning, perspective, and of the construction of maps and charts. In short, wherever the construction of figures or computation is in requisition, the principles of mathematics are indispensable. Let us take a

brief view of mathematics as an instrument of mental improvement, as this is the aspect, perhaps, in which as educators it merits our most serious consideration. It may be safely affirmed that mathematics, as an instrument of intellectual improvement, cultivates chiefly the reasoning faculty.

It also exercises the memory in a considerable degree; and it has a powerful tendency to form a habit of undivided and unremitting attention, which is indispensable for success in any pursuit. Every branch in the theory of the science consists almost entirely of an uninterrupted process of reasoning; and as this process is identical in every subject, whether of necessary or contingent truth, no other study can be more conducive to the improvement of this faculty. A step of reasoning or a syllogism, consists of a major and a minor proposition, and a conclusion; and by a law of our mental constitution, whether it be called judgment or the faculty of relative suggestion, the conclusion follows as a necessary consequence from these premises, in reasoning in any subject as well as in mathematics; so that reasoning is exactly of the same nature in this investigation both of necessary and contingent truth—with this difference, that in the former the chain of sequence is of almost indefinite extent, while in the latter it is generally brief. There is, however, a difference in the fundamental principles. The premises in the former are incontrovertible, at least in pure mathematics, and generally in the other branches of the science.

Whereas, in subjects of contingent matter, the premises are usually only probable, and the probability of the conclusion must therefore be commensurate with that of the premises. Synthetic geometry, or the ordinary didactic method, affords, in the gradual exposition of geometrical truth, excellent specimens of the most clear and satisfactory reasoning: and that branch of it called geometrical analysis, furnishes, in addition, examples of the resolution of truth into its simple elementary principles. But analytical geometry and the other analytical branches of the science, supply the best examples of the resolution of complex questions—a process which must be effected before the conditions can be

comprised in symbolical expressions. They also accustom the mind to comprehensive views, and afford excellent specimens of subtle reasoning, and exercise the mind in the interpretation of the expression of final results. In these branches, a subordinate acquirement, made at the expense of much perseverance, is necessary, namely: the power of managing skillfully the concise but comprehensive algorithm employed in its researches, of which, however, that part of the operations that may be considered to be in some measure mechanical, will sometimes interrupt the chain of reasoning, though in the theory the time thus spent by an expert analyst is comparatively short. The application of the principles of the science to physical subjects, affords, in addition to the preceding kinds of intellectual exercise, examples of premises resting on probable evidence, and requires habits of close reflection and accurate observation, and, also, furnishes the finest specimens to be found in the whole range of human knowledge of the methods of philosophical research, both inductive and deductive. In straining the mind to such researches it affords peculiar advantages, for although it is a subject of contingent matter, the rigorous nature of investigation operates as a salutary check against those fantastic speculations that result from the unrestrained excursions of the imaginative faculty, which in original researches in other subjects, frequently produce extravagant theories; and which, from the unsettled state of the principles, may, with a little ingenuity, be made very plausible; whereas any such theory in physics would be certain to meet with speedy and complete refutation. A knowledge of the mathematics and of the methods employed in investigating the necessary truths embodied in them is not inconsistent with a knowledge of the nature of moral evidence. An exclusive attention to any department of study may, to some extent, disqualify the mind for appreciating truth in other departments. If the mere mathematician can not appreciate minute degrees of moral evidence, neither can the mere student of probable truth appreciate the necessity of scientific rigor in mathematical science. Both might commit serious blunders in the department to which they are strangers, and the lat-

ter, if exclusively acquainted with those branches in which the premises are exceedingly doubtful, might from the constant and bewildering uncertainty of his own conclusions, be liable to adopt a theory of universal skepticism. It is a truth readily assented to even by a mathematician that of two contradictory propositions, that for which there is a preponderance of evidence, ought to be believed in preference to the other, although the amount of evidence fall far short of demonstration. A step of reasoning in mathematics is clear and satisfactory when once perceived, which is also the case in other subjects; for in them the vagueness or unsatisfactoriness accompanying any discussion properly conducted, originates not in the reasoning, but in the uncertainty, and sometimes in the multiplicity of the principles involved. A distinction, however, must be made between difficulty and uncertainty, for they are not necessarily connected, at least if difficulty be estimated by the degree of exercise required of the higher faculties. The converse of this, however, that is, the union of difficulty with certainty of principles, is constantly experienced by the mathematician; for such is the complexity arising from the multiplicity of the principles involved in some subjects, that, notwithstanding the certainty of its principles, and the perfection of its language, and the almost magical power of the higher calculus, they have baffled the most resolute efforts of the most able and vigorous minds; and had its language been less perfect, there are many subjects already thoroughly investigated, the difficulties of which would have been insurmountable. It is an undoubted fact, that many men of reflecting minds have been addicted to the study of mathematics, which proves that there is an adaptation between it and minds of this complexion, or that it is fitted to afford their powers sufficient exercise. Many celebrated mathematicians, too, have been very eminent for their acquirements in general knowledge; in proof of which it is merely necessary to mention the names of Eratosthenes, of almost universal attainments; the learned Beda, the eloquent Pascal; Ramus, of uncommon acuteness and eloquence; Descartes, Leibnitz, Condorcet, D'Alembert, Dr. Clarke, Bishop Horseley, the

learned Barrow, Playfair, and the all but universal Young, and the superior talents of many mathematicians, not so distinguished for varied attainments, is undeniable, as of Newton, Maclaurin, La Grange, Laplace, and many others.

There is one American name, the name of a living writer, who deserves to be classed with the great names just enumerated—one whose work, the "Philosophy of Mathematics," claims the admiration of every votary of the exact sciences, and which is destined to find its way into every first class teacher's library in the land. I refer to Prof. Bledsoe. In the science of mathematics there is also great scope for the exercise of taste; for since taste consists in the judicious selection of the fittest and most agreeable and most efficient means to accomplish an end, there must be an opportunity for its exercise in the discussion of scientific as well as of literary subjects; and the qualities of unity, clearness, force and elegance, thus belong to scientific as well as to literary composition. Mathematics, it is true, can not afford information respecting the principles of other subjects, no more than natural philosophy or chemistry; but it possesses this peculiar advantage, that every branch of science tends rapidly toward a state of perfection in proportion as it admits of mathematical investigation. Since the science of theoretical mathematics consists almost entirely of a continued chain of reasoning, it affords in a given period of study, many more examples of this process than any other subject.

A mind, therefore, disciplined by this invigorating pursuit, and also improved by the study of other branches, will certainly be the best qualified for investigating either necessary or contingent truth.

The student of mathematics, says Dr. Whewell, is accustomed to a chain of deduction, where each link hangs upon the preceding, and thus he learns continuity of attention and coherency of thought. His notice is steadily fixed upon those circumstances only in the subject in which the demonstrativeness depends, and thus that mixture of various grounds of conviction, which is so common in other men's minds, is rigorously excluded from his. He knows that all depends upon his first principles, and flows inevitably from

them, that however far he may have traveled, he can at will go over any portion of his path and satisfy himself that it is legitimate; and thus he acquires a just persuasion of the importance of principles on the one hand, and on the other of the necessary and constant identity of the conclusions legitimately deduced from them. Mr. President, and ye other co-workers in the cause of education, whether the scene of your labors be in a splendid structure erected by the liberality of a great metropolis, like that in which we are assembled, or in a far less imposing edifice—in some secluded valley, or on the slope of some lofty hill-side, whose crust but half conceals the mineral treasures beneath—wherever located you will be advocating the cause of educational progress, and true mental acumen, and great intellectual strength, while advocating the study of mathematics as extensively as may be into the people's colleges—the free public schools of this city and of this State. I have treated very imperfectly the general question, but I have no doubt that in this institute will be found many able teachers ready to express their views and discuss this subject in detail. Some are here, I know, who have tested, with very flattering results, the introduction of the study of elementary geometry in a class of very young pupils, and I can bear testimony to the progress made and the thorough apprehension of principles. Do not, therefore, fellow teachers, say there is no time or room in the course; if you desire to educate thoroughly, you must fix the attention of your pupils, and develop early in them that reasoning power they need to use so extensively during the whole period of their education. You can do this best by a timely and judicious use of mathematics.—*S. F. Times*, June 20, 1868.

LITERARY CURIOSITIES.

A LADY of San Francisco is said to have occupied several years in hunting up and fitting together the following thirty-eight lines from thirty-eight English poets. The names of the authors are given below each line:—

LIFE.

Why all this toil for triumph of an hour?
Young.
Life's a short summer, man a flower;
Dr. Johnson.
By turn we catch the vital breath and die—
Pope.
The cradle and the tomb, alas! so nigh.
Prior.
To be is far better than not to be,
Sewell.
Though all man's life may seem a tragedy;
Spencer.
But light cares speak when mighty griefs are dumb.
Daniel.
The bottom is but shallow whence they come;
Raleigh.
Your fate is but the common fate of all;
Longfellow.
Unmingled joys, here, no man befall.
Southwell.
Nature to each allots his proper sphere,
Congreve.
Fortune makes folly her peculiar care;
Churchill.
Custom does not often reason overrule.
Rochester.
And throw a cruel sunshine on a fool.
Armstrong.
Live well, how long or short, permit to heaven;
Milton.
They who forgive most shall be most forgiven.
Bailey.
Sin may be clasped so close we can not see its face;
Trench.
Vile intercourse where virtue has not place;
Somerville.
Then keep each passion down, however dear,
Thompson.

Thou pendulum, betwixt a smile and tear;
Byron.
Her sensual snares let faithless Pleasures lay,
Smollet.
With craft and skill to ruin and betray,
Crabbe.
Soar not too high to fall, but stoop to rise,
Massinger.
We masters grow of all that we despise.
Cowley.
O, then, renounce that impious self-esteem,
Beattie.
Riches have wings and grandeur is a dream.
Cooper.
Think not ambition wise because 'tis brave,
Davenant.
The paths of glory lead but to the grave.
Gray.
What is ambition? 'tis a glorious cheat,
Willis.
Only destructive to the brave and great.
Addison.
What's all the gaudy glitter of a crown?
Dryden.
The way to bliss lies not on beds of down.
Quarles.
How long we live, not years, but actions tell;
Watkins.
That man lives twice who lives the first life well.
Herrick.
Make then, while yet ye may, your God your friend,
Mason.
Whom Christians worship, yet not comprehend,
Hill.
The trust that's given guard, and to yourself be just;
Dana.
For, live we how we can, yet die we must.
Shakespeare.

A QUEER OLD RHYME.

HERE is a queer old rhyme which is quite contrary in sense, as you read it across, running the lines together :—

I always did intend, To take to me a wife,
Single my life to spend, Would grieve my very life,
It much delighteth me, To think upon a bride,
To live from woman free, I can't be satisfied,
The female to my mind, The joy I can't express
I ne'er expect to find, So great in singleness,
A bachelor to live, I never could agree,
My mind I freely give, A married man to be.

MATRIMONY.

MOST people believe the following lines should be read as they are printed ; but a crusty old bachelor reads the first and third, and second and fourth, lines together :—

The man must lead a happy life
Who is directed by his wife;
Who's free from matrimonial chains,
Is sure to suffer for his pains.

Adam could find no real peace
Until he saw a woman's face;
When Eve was given for a mate,
Adam was in a happy state.

In all the female heart appear
Truth, darling of a heart sincere,
Hypocrisy, deceit and pride,
Ne'er known in woman to reside.

What tongue is able to unfold
The worth in woman we behold?
The falsehoods that in woman dwell
Is almost imperceptible.

Hanged be the foolish man, I say,
Who will not yield to woman's sway!
Who changes from his singleness,
Is sure of perfect blessedness.

THE LORD'S PRAYER.

[THE following is one of the most remarkable compositions ever published. It evinces an ingenuity of arrangement such as we have never seen before. Explanation: The initial capitals spell, "My boast is in the glorious Cross of Christ." The words in *italics*, when read from top to bottom and from bottom to top, form the Lord's Prayer complete:]—

Make known the gospel truths, *our* Father, King,
Yield us Thy grace, dear *Father*, from above;
Bless us with hearts *which* feelingly can sing,
"Our life Thou *art* for *ever*, God of Love!"
Assuage our grief *in* love, *for* Christ we pray,
Since the bright Prince of *Heaven* and *glory* died,
Took all our sins and *hallowed the* display,
Infant *be* ing, first a man, *and* then was crucified.
Stupendous God! *Thy* grace and *power* make known,
In Jesus' *name* let all *the* world rejoice;
New labors in *Thy* heavenly *kingdom* own
That blessed *kingdom* for thy saints *the* choice.
How vile to *come* to Thee *is* all our cry,
Enemies to *Thy* self and all that *Thine*,
Graceless our *will*, we live *for* vanity,
Loathing thy very *be* ing *evil* in design.
O God! Thy will be *done from* earth to Heaven,
Reclining *on* the gospel let *us* live,
In *earth* from sin *deliver* ed and forgiven.
Oh! *as* Thyself *but* teach us to forgive!
Unless *it*'s power *temptation* doth destroy,
Sure *is* our fall *into* the depths of woe—
Carnal *in* mind, we've *not* a glimpse of joy
Raised against *Heaven*; in *us* no hope can flow.
Oh! *give* us grace and *lead* us on Thy way;
Shine on *us* with Thy love, and give *us* peace;
Self and *this* sin that rise *against* us slay;
Oh! grant each *day* our *trespass* es may cease.
Forgive *our* evil deeds *that* oft we do,
Convince us *daily* of *them* to our shame;

Help us with heavenly *bread*, *forgive* us, too,
Recurrent lusts, *and we*'ll adore Thy name;
In Thy *forgive* ness we *as* saints can die,
Since for *us* and our *trespasses* so high,
Thy Son, *our* Saviour, bled on Calvary.

A VERBAL WHIMSEY.

AN English poet gives us the following poem, containing only one vowel:—

"No monk too good to rob, or cog, or plot,
No fool so gross to bolt Scotch collop hot,
From Donjon tops no Oronock rolls,
Logwood, not Lotos, floods Oporto's bowl.
Troops of old tosspots oft to sot consort,
Box tops school-boys, do flog for sport.
No cool monsoon blows oft on Oxford dons,
Orthodox jog-trot, book-worm Solomon!
Bold Ostrogoths of ghosts no horror show,
On London shop front no hop-blossoms grow,
To crooks of gold no dodo looks for food,
On soft cloth foot-stool no fox doth brood,
Long storm-tost sloops forlorn do work to port,
Rooks do not roost on spoons, nor woodcocks snort,
Nor dog on snow-drops or on coltsfoot roll,
Nor common frogs concoct long protocols."

CURIOSITIES OF THE ENGLISH LANGUAGE.

THE English language, perhaps more than any other, is capable of queer and ingenious uses, misuses, transformations and combinations. The student of the curiosities of literature is astonished at its wonderful susceptibility to odd pranks in the way of orthography, syntax, prosody, pronunciation, rhyme and translation. Some curious effects are sometimes produced by an ingenious

arrangement of pronunciation. A device has often been used in political and other partisan songs called "echo verses," in which the sounds of the last words of a line are repeated after the manner of an echo, the whole being so contrived as to express some significant meaning. This, though a short specimen, is a good illustration :—

"What are they who pay three guineas
To hear a tune of Paganini's ?
(*Echo*) Pack o' ninnies !"

PLAY UPON WORDS.

Of course the whole innumerable host of puns bad and good which are floating about in books and newspapers, as well as in social circles, are all predicated upon similarities in pronunciation. A pun that has in it a sharp and witty meaning is a good thing ; but the immense deal of trash and of far-fetched constructions that are put in circulation by laborers after the pun, which is worth nothing if it is not spontaneous, has given this kind of literature a bad reputation, so that few good authors will use it. The similarity of sound has given rise to such senseless productions as the following, which may be queer, but are certainly not witty :—

"Mr. Popp, of Poppville, in Popp County, fancying himself to be very popular with his lady love, 'popped the question' to her under the poplar tree, when she referred him to her poppy, who, when asked for his consent, laboring under the influence of ginger-pop, popped him out of the door to the tune of 'Pop goes the weasel.'"

Or this: "You have no business to have any business with other people's business ; but mind your own business, and that is business enough."

The following is given as a statement of fact which may possibly add something to its value :—

"There is a young man in the army who was born July 4th, at 4 o'clock P. M., at No. 44 at a street in this city, 1814, a fourth child, has four names, enlisted in Company D, of the Fourth Battalion, Forty-fourth Regiment, fourth

company, and on the 4th, day of September was appointed Fourth Corporal, and is now going forth to defend his country."

Here is a traveler's report of a conversation with a backwoodsman :—

"Whose house?" "Mogs." "Of what built?" "Logs." "Any neighbors?" "Frogs." "What is the soil?" "Bogs." "The climate?" "Fogs." "Your diet?" "Hogs." "How do you catch them?" "Dogs."

An original instance is given of answering two questions at one time :—

"Here, Biddy, my darlint, what's the time o' night, and where's the pertaty pudding?"

"It is eight, sir."

Which may as well be followed by an account of a curious misunderstanding :—

"I come for the saw, sir," said an urchin.

"What saucer?"

"Why, the saw, sir, that you borrowed."

"I borrowed no saucer."

"Sure you did, sir—borrowed our saw, sir."

"Be off, never saw your saucer."

"But you did, sir—there's the saw, sir, now, sir."

"Oh! you want the *saw?*"

Here is a Quaker toast that has a thought in it :—

"This is me and mine to thee and thine. I wish when thou and thine come to see me and mine, that we and mine will treat thee and thine as kindly as thee and thine have treated me and mine."

This is a new version of the old compliment, which runs something after this wise :—

"I wish thee and thy folks loved me and my folks as well as me and my folks love thee and thy folks. For sure, there never was folks since folks was folks that ever loved folks half so well as me and my folks love thee and thy folks."

WORDS WITHOUT RHYMES.

POETS have been often greatly puzzled to find rhymes for particular words. It is said that there is no word in the English language which fairly rhymes with "step" or "month." Byron says that it is impossible to find a rhyme for the word "silver." Every little while some inquisitive genius proclaims that some particular word is without a rhyme, and challenges the world to disprove his assertion. Forthwith many people cudgel their brains, and sometimes do produce the desired word. Some years ago the *Knickerbocker* offered a brass quarter dollar to the person who could find a rhyme to the word "window." The prize was earned by the following effort, which furnishes the rhyme and has some fun in it as well :—

A cruel man a beetle caught,
And to the wall him pinned, oh!
Then said the beetle to the crowd,
Though I'm stuck up, I am not proud,"
And his soul went out of the window.

Somebody has challenged a rhyme for "carpet," and the following was the best production elicited, styled "Lines to a Pretty Barmaid":—

Sweet maid of the inn,
'Tis surely no sin
To toast such a beautiful bar pet.
Believe me, my dear,
Your feet would appear
At home on a nobleman's carpet.

A line ending with "harp it" also came near to the mark. A rhyme was found from Timbuctoo, as follows :—

I went a hunting on the plains,
The plains of Timbuctoo;
I shot one buck for all my pains,
And he was a slim buck too.

And also for "garden":

Though Afric's lion be not here
In showman's stoutly barr'd den,
An "Irish Lion" you may see
At large in Winter Garden.

Hood, in his humorous poems, either originated or adopted the idea of dividing words, at the end of a line for the sake of rhyme. The following which is floating about, is a specimen of that kind of composition:—

A year old to-day is little Molly—
Romping, noisy, fat and jolly;
Too young to walk, and like a polly-
wog excited, she goes froli-
cking about the floor, and golly!
What a laugh!

Leonine verses are those in which the terminations rhyme with the central words. An inscription in the Chapter House of York Cathedral is a beautiful specimen of this:—

"Ut Rosa flos florum, sic est domus ista domorum."

FOREIGNERS AND THE ENGLISH LANGUAGE.

THE English language must appear fearfully and wonderfully made to a foreigner. One of them, looking at a picture of a number of vessels, said, "See, what a flock of ships."

He was told that a flock of ships was called a fleet, but that a fleet of sheep was called a flock. And it was added for his guidance in mastering the intricacies of our language, that a flock of girls is called a bevy, but a bevy of wolves is called a pack, and a pack of thieves is called a gang, and a gang of angels is called a host, and a host of porpoises is called a shoal, and a shoal of buffaloes is called a herd, and a herd of children is called a covey, and a covey of beauties is called a galaxy, and a galaxy of ruffians is called a horde, and a horde of rubbish is

called a heap, and a heap of oxen is called a drove, and a drove of blackguards is called a mob, and a mob of whales is called a school, and a school of worshipers is called a congregation, and a congregation of engineers is called a corps, and a corps of robbers is called a band, and a band of locusts is called a swarm, and a swarm of people is called a crowd, and a crowd of gentlefolks is called the *élite*, and the *élite* of the city's thieves and rascals are called the roughs, and the miscellaneous crowd of city folks is called the community or the public, according as they are spoken of by the religious community or secular public.

Now, again, the Hudson River is fast when the ice is immovable, and then the ice disappeared very fast, for it was loose. A clock is called fast when it is quicker than time; but a man is told to stand fast when he is desired to remain stationary. People fast when they have nothing to eat, and eat fast, consequently, when opportunity offers.

A story is told of a German who attempted to court in English with the aid of a dictionary. Having obtained an interview with an English lady who, having recently lost her husband, must be open to new offers, he opened the business thus:—

"High-born madam, since your husband has kicked the bucket—"

"Sir!" interrupted the lady, astonished and displeased.

"Oh, pardon—nine, ten thousand pardon! Now I make new beginning—quite order beginning. Madam, since your husband have cut his stick—"

It may be supposed that this did not mend matters; and reading as much in the lady's countenance, he said, perspiring with shame at having a second time missed fire:—

"Madam, since your husband has gone to kingdom come—"

This he said beseechingly, but the lady was past propitiation by this time, and rapidly moved toward the door. Taking a last hurried look at his dictionary, the German flew after the lady, crying out in a voice of despair:—

"Madam, since your husband, your most respected husband, have hopped de twig—"

This was his sheet-anchor, and as this also "came home," of course the poor man was totally wrecked. It turned out that the dictionary he had used had put down the verb *sterben* (to die) with the following worshipful series of equivalents: 1. To kick the bucket. 2. To cut one's stick. 3. To go to kingdom come. 4. To hop the twig: to hop off the perch into Davy's locker.

A French gentleman who was caressing a dog one day, remarked: "I love de dogs, de cats, de sheep, de pigs; in short, any thing vat is beastly."

Of course we make as funny mistakes in other languages if we only knew it.

> "Miss Blank, it is known, is accustomed to say
> Many very queer things in a very queer way;
> But of all her mistakes, the absurdest and oddest,
> Occurred when she called French *modiste* modest."

THE HUMOROUS VEIN.

An individual is told of as doing business in one of the markets, who is down on customers who don't speak properly. "What's eggs this morning?" says a customer. "Eggs, of course," says the dealer. "I mean, how do they go?" "Go where?" "Sho—!" says the customer, getting in a fury, "what for eggs?" "Money, money, sir! or good indorsed credit!" says the dealer. "Don't you understand the English language, sir?" says the customer. "Not as you mix it and mingle it, I don't," responded the egg merchant. "What—is—the—price—per—dozen—for—your—eggs?" "Ah, now you talk," says the dealer. "Sixteen cents per dozen is the price, sir!" They traded. But it appears that another customer, who, on asking, "What's eggs this morning?" was answered, "Eggs, of course," responded: "Well, I am glad of that, for the last I got of you were half chickens."

A Dutchman had two pigs—a large one and a small one. The smallest being the oldest, he was trying to explain to a customer, and did it in this wise: "The little pig is the piggest." Upon which his vrow, assuming to correct him,

said: "You will excuse him, he no speak as good English as me—he no means the little pig is the piggest, but te young little pig is te oldest."

In a Dutch translation of Addison's Cato, the words, "Plato, thou reasonest well," are rendered: "Just so, you are very right, Mynheer Plato."

"The dear little things," said an old nurse of her mistress's twin children; "one looks so much like both, you can't tell t'other from which!"

The contradictions of pronunciation in the termination "ough," are amusingly displayed in the following lines:—

"Wife, make me some dumplings of dough;
They're better than meal for my cough;
Pray let them be boiled till hot through,
But not till they're heavy or tough.
Now I must be off to the plough,
And the boys, when they've had enough,
Must keep the flies off with a bough,
While the old mare drinks at the trough!"

A report of a prize fight must be a very interesting thing for a foreigner to translate. A very simple report of a fight in which some "game" individual mounted the ladder of fame from the area of the prize ring by a certain number of "rounds," tells us that the combatants struck each other with the mawleys and bunches of fives upon the head, the nut, the cone, the conk, the canister, the noddle, the mug, the knowledge-box; the nose, the sneezer, the snorer, the snuffer, the snuff-tray, the nozzle, the mazzard; the eyes, the ogles, the optics, the peepers; the mouth, the kisser, the whistler, the orator-trap; drawing the blood, the claret, the ruby, the crimson, the home-brewed, the gravy; and in several instances knocked the unfortunate knocker off his pins, his pegs, his stumps, and his foundation, to say nothing of boring, fibbing, and sending him to grass. Who wants the belt?

So it must be interesting to a foreigner who relies on his dictionary, to hear the talk of "dead beats," "small potatoes—few in a hill," bully boys," "big things," and things

that one "can't see." The initials "O. K.," which mean "Oll Korrect," are at least twenty years old.

INGENIOUS USE OF LANGUAGES.

LET us notice some of the ingenious things that can be done with the language. The repetition of the same class of rhymes is quite common, but the following epistles may be readable:—

MADAM:

Most worthy of estimation, after long consideration,
And much meditation, of the great reputation,
You possess my admiration, and if such oblavation
Is worthy of observation, and can obtain consideration,
It will be aggrandization beyond all calculation,
To the joy and exultation
Of yours, SANS DISSIMULATION.

SIR:

I have perused your oration with much deliberation,
And little consternation, at the great infatuation
Of your weak imagination to show such veneration,
On so slight a foundation; but after examination
And serious contemplation, I suppose your admiration
Was the fruit of recreation, or had sprung from ostentation
To display your education by odd enumeration,
Or rather multiplication, of words of the same termination,
Though of great variation in each respective signification.
Not without disputation, your laborious application
To so tedious an occupation, deserves commendation,
And thinking imitation a sufficient gratification,
I am, without hesitation,
Yours, MARY MODERATION.

Palindromes, or lines that read the same backward and forward, are frequent in Latin or Greek, but it is quite difficult to construct them in English. The lawyer's motto, "*Si nummi immunis*," is a good specimen of a Latin one. The best in English is Adam's first observation to Eve, "Madam, I'm Adam." The one by Taylor, the water poet, "Lewd I did live & evil did I dwel," lacks completeness in two points.

Here is a sentence of thirty-two words, which some ingenious child has constructed with just the letters found in the word maiden: "Ida, a maiden, a mean man named Ned Dean, and Media, a mad dame, made me mend a die and a dime, and mind a mine in a dim den in Maine."

The following queer sentence originated, like many other odd things, in one of our monthly magazines:—

"Sator arepo tenet opera rotas."

1. This spells backward and forward all the same.

2. Then, taking all the first letters of each word, spells the first word.

3. Then taking all the second letters of each word, spells the second word.

4. Then all the third, and so on through the fourth and fifth.

5. Then, commencing with the last letter of each word, spells the last.

6. Then the next to the last of each word, and so on through.

Here is the way a grammarian conjugated the increasing heat:—

"Hot, hotter, hottest, hottentot, hottentoter, hottentotest, hottentotissimo, hottentotissimus, hot as an oven, hot as two ovens, hot as four ovens, hot as seven ovens hot."

A gentleman who could not pronounce the letter R was asked to read the following:—

"Robert gave Richard a rap in the ribs,
For roasting the rabbit so rare."

He evaded the difficulty in the following ingenious manner:

"Bobby gave Dickey a thump in the side,
For cooking the bunny so little."

We will close by relating a marvel in the way of logic done by Granger. He was a remarkably ugly man, but contended that he was the handsomest thing in the world. He proved it thus: "The handsomest part of the world," said he, "is Europe; of Europe, France; of France, Paris;

of Paris, the university; of the university, the college of ——; in the college of ——, the handsomest room is mine; in my room, I am the handsomest thing; *ergo*, I am the handsomest thing in the world."—*N. Y. Evening Post.*

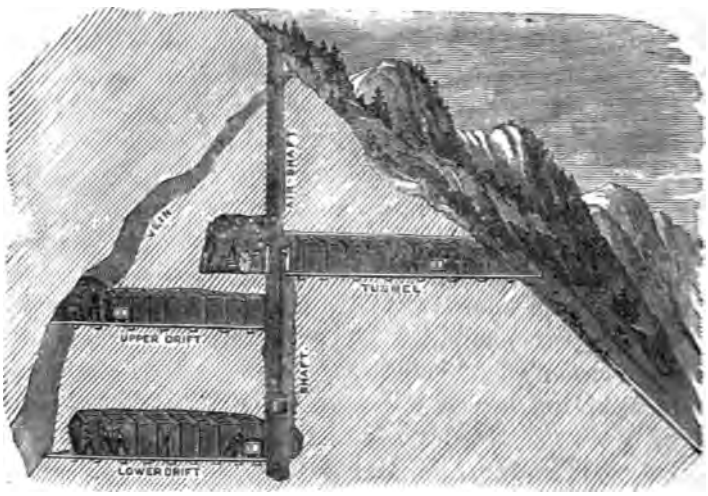
QUARTZ MINING TWO THOUSAND YEARS AGO.

E have been favored by a gentleman, somewhat given to antiquarian researches, with a description of mining for gold, as it was carried on about a century before the birth of Christ, and for a considerable time before, which, in all its essential features, precisely resembles the mode of working quartz mines now practiced in California. It will be observed that the principle upon which quartz is taken out of the earth, calcined, crushed with stamps and rollers, and also the manner of separating the gold from the pulverized rock, have undergone no change, the additional elements introduced being those of steam, of quicksilver, gunpowder, and the improvements in the manufacture of tools, which have accompanied and form a part of modern civilization. The description is full of interest to California. It is extracted from the third book of the "Corpus Historicum" of Diodorus Siculus, a Sicilian author, who flourished about threescore years before the beginning of the Christian era.

"In the confines of Egypt, and the neighboring countries of Arabia and Ethiopia, there is a place full of rich gold mines, out of which, with much cost, and pains of many laborers, gold is dug. The soil here naturally is black, but in the body of the earth run many white veins, shining with white marble, and glistening with all sorts of other bright metals, out of which laborious mines those appointed overseers cause the gold to be dug up by the labor of a vast multitude of people. * * * * * *

"The earth which is hardest and full of gold, they soften by putting fire under it, and then work it out with their

hands. [Gunpowder had not been invented in those days, and the expedient adopted for working out the rock was a very excellent one.] The rocks thus softened and made more pliant and yielding, several thousands of profligate wretches [this scarcely applies to our miners] break into pieces with hammers and pickaxes. There is one artist that is the overseer of the whole work, who marks out the stone, and shows the laborers the way and manner how he would have it done. Those that are the strongest among them that are appointed to this slavery, provided with sharp iron pickaxes, cleave the marble-shining rock by mere force and strength, and not by any sleight of hand. They undermine



VERTICAL SECTION OF A QUARTZ MINE.

not the rock in a direct line, but follow the bright shining vein of the mine. They carry lamps, fastened to their foreheads, to give them light, being otherways in perfect darkness in the various windings and turnings wrought in the mine; and having their bodies appearing sometimes of one color and sometimes of another [according to the nature of the mine where they worked]; they throw the lumps and pieces of the stone cut out of the rock upon the floor. And thus they are employed continually without intermission, at the very nod of the overseer or tax-master, who lashes them

severely, besides. And there are little boys who attend upon the laborers in the mine, and, with great labor and toil, gather up the lumps and pieces hewed out of the rock as they are cast upon the ground, and carry them forth and lay them upon the bank. Those that are about thirty years of age take a piece of the rock of such a certain quantity, and pound it in a stone mortar with iron pestles, till it be as small as a vetch; then those little stones so pounded are taken from them by women and older men, who cast them into mills, that stand together near, in a long row; and two or three of them being employed at one mill, they grind it so long till it be as small as fine meal, according to the pattern given them. * * * * * At length, the masters of the work take the stone thus ground to powder, and carry it away in order to the perfecting of it. They spread the mineral so ground upon a broad board, somewhat hollow, and lying shelving, and pouring water upon it, rub it and cleanse it, and so all the earthy and drossy part being separated from the rest by the water, it runs off the board, and the gold, by reason of its weight, remains behind. Then, washing it several times again, they first rub it lightly with their hands; afterwards they draw up the earthy and drossy matter with slender sponges, gently applied to the powdered dust, till it be clean pure gold. At last other workmen take it away by weight and measure, and these put it into earthen urns, and, according to the quality of gold in every urn, they mix with it some lead, grains of salt, a little tin, and barley bran. Then covering every pot close, and carefully daubing them over with clay, they put them in a furnace, where they abide five days and nights together: then, after they have stood to cool a convenient time, nothing of the other matter is to be found in the pots, but only pure refined gold, some little diminished in the weight."

The plan adopted for saving the fine gold, without the use of quicksilver, may have been a good one, but we imagine our California miners would make good wages out of their Ethiopic "tailings," provided the rock paid well at first.—*S. F. Herald*, 1857.

CLEOPATRA.

THE following remarkable poem was published in *Blackwood's Magazine.* The vivid brilliancy of description, and the sensual richness of color which characterize the first half of the poem, are very fascinating, while the power of animal passion in the closing portions presents a singular psychological study:—

Here, Charmian, take my bracelets:
They bar with a purple stain
My arms. Turn over my pillows—
They are hot where I have lain.
Open the lattice wider,
A gauze on my bosom throw,
And let me inhale the odors
That over the garden flow.

I dreamed I was with my Antony,
And in his arms I lay;
Ah, me! the vision has vanished—
Its music has died away.
The flame and the perfume have perished—
As this spiced aromatic pastille
That wound the blue smoke of its odor
Is now but an ashy hill.

Scatter upon me rose leaves,
They cool me after my sleep,
And with sandal odors fan me
Till into my veins they creep;
Reach down the lute, and play me
A melancholy tune,
To rhyme with a dream that has vanished,
And the slumbering afternoon.

There, drowsing in golden sunlight,
Loiters the low, smooth Nile,
Through slender papyri, that cover
The sleeping crocodile;

The lotus lolls on the water,
And opens its heart of gold,
And over its broad leaf-pavement
Never a ripple is rolled.
The twilight breeze is too lazy
Those feathery plants to wave,
And yon little cloud is as motionless
As a stone above a grave.

Ah, me! this lifeless nature
Oppresses my heart and brain!
Oh! for a storm and thunder—
For lightning and wild, fierce rain!
Fling down that lute—I hate it!
Take rather his buckler and sword,
And crash them and clash them together,
Till this sleeping world is stirred.

Hark! to my Indian beauty—
My cockatoo, creamy and white,
With roses under his feathers—
That flashes across the light.
Look! listen! as backward and forward
To his hoop of gold he clings;
How he trembles, with crest uplifted,
And he shrieks as he madly swings!
Oh, cockatoo, shriek for Antony!
Cry, "Come, my love, come home!"
Shriek, "Antony! Antony! Antony!"
Till he hears you even in Rome.

There—leave me, and take from my chamber
That wretched little gazelle,
With its bright, black eyes so meaningless,
And its silly tinkling bell!
Take him—my nerves he vexes—
The things without blood or brain,
Or, by the body of Isis,
I'll snap his thin neck in twain!

Leave me to gaze at the landscape
  Mistily stretching away,
When the afternoon's opaline tremors
  O'er the mountains quivering play;
Till the fiercer splendor of sunset
  Pours from the west its fire,
And melted, as in crucible,
  Their earthly forms expire;
And the bald, blear skull of the desert
  With glowing mountains is crowned,
That, burning like molten jewels,
  Circle its temple round.

I will lie and dream of the past time,
  Æons of thought away,
And through the jungle of memory
  Loosen my fancy to play;
When, a smooth and velvety tiger,
  Ribbed with yellow and black,
Supple and cushion-footed,
  I wandered, where never the track
Of a human creature had rustled
  The silence of mighty woods,
And fierce in a tyrannous freedom,
  I knew but the law of my moods.
The elephant, trumpeting, started
  When he heard my footsteps near,
And the spotted giraffes fled wildly
  In a yellow cloud of fear.
I sucked in the noontide splendor,
  Quivering along the glade;
Or, yawning, panting, and dreaming,
  Basked in the tamarisk shade,
Till I heard my wild mate roaring,
  As the shadows of night came on,
To brood in the trees' thick branches,
  Till the shadow of sleep was gone.
Then I roused, and roared in answer,
  And unsheathed from my cushioned feet
My curving claws, and stretched me,
  And wandered my mate to greet.

We toyed in the amber moonlight,
  Upon the warm, flat sand,
And struck at each other our massive arms—
  How powerful he was and grand!
His yellow eyes flashed fiercely
  As he crouched and gazed at me,
And his quivering tail, like a serpent,
  Twitched, curving nervously;
Then, like a storm, he seized me,
  With a wild, triumphant cry,
And we met, as two clouds in heaven,
  When the thunders before them fly;
We grappled and struggled together,
  For his love, like his rage, was rude;
And his teeth in the swelling folds of my neck
  At times, in our play, drew blood.

Often another suitor—
  For I was flexile and fair—
Fought for me in the moonlight,
  While I lay crouching there,
Till his blood was drained by the desert,
  And ruffled with triumph and power,
He licked me and lay beside me
  To breathe him a vast half hour.
Then, down to the fountain we loitered,
  Where the antelopes came to drink:
Like a bolt we sprang upon them,
  Ere they had time to shrink;
We drank their blood and crushed them,
  And tore them limb from limb,
And the hungriest lion doubted
  Ere he disputed with him.

That was a life to live for!
  Not this weak human life,
With its frivolous, bloodless passions,
  Its poor and petty strife!
Come to my arms, my hero,
  The shadows of twilight grow,
And the tiger's ancient fierceness
  In my veins begins to flow.

Come not cringing to sue me!
  Take me with triumph and power,
As a warrior that storms a fortress!
  I will not shrink or cower.
Come, as you came in the desert,
  Ere we were women and men,
When the tiger passions were in us,
  And love as you loved me then!

Attributed to W. W. Story.

A CONTINENT COVERED WITH ICE.

PROFESSOR AGASSIZ comes to the conclusion that the continent of North America was once covered with ice a mile in thickness, thereby agreeing with Professor Hitchcock, and other geological writers, concerning the glacial period. In proof of this conclusion, he says that the slope of the Alleghany range of mountains is glacier-worn to the very top, except a few points which were above the level of the icy mass. Mount Washington, for instance, is over six thousand feet high, and the rough, unpolished surface of the summit, covered with loose fragments, just below the level of which glacier marks come to an end, tells that it lifted its head above the desolate waste of ice and snow. In this region, then, the thickness of the ice can not have been much less than six thousand feet, and this is in keeping with the same kinds of evidence in other parts of the country, for when the mountains are much below six thousand feet, the ice seems to have passed directly over them, while the peaks rising to that height are left untouched. The glacier, he argues, was God's great plow; and when the ice vanished from the land, it left it prepared for the husbandman. The hard surface of the rocks was ground to powder, the elements of the soil were mingled in fair proportions; granite was carried into the lime regions, lime was mingled with the arid and unproductive granite district, and a soil was prepared fit for the agricultural uses of man. There are evidences all over the polar regions to show that at one period the heat of the tropics extended all over the globe. The ice period is

supposed to be long subsequent to this, and next to the last before the advent of man.

BROOK TROUTING.

ERE we are by the brookside. This baby stream was cradled among yonder hills, and these sloping meadows are its play-ground. See how it dances through the green-sward. Hark how it sings. But there are other choristers. The pleasant treble of the lark, the sharp notes of gossiping blackbirds, the sonorous twang of the bullfrog, and the semitones of clouds of ephemeræ, mingle with the refrain of the rivulet at our feet, and the *pot-pourri* is cheerful and exhilarating, if not harmonious.

But it was not alone to "babble of green fields" that we left the "thick solitudes called social," to bivouac by the brookside. There be shapely creatures clouded with purple and orange, and bedropped with crimson, lying perdu under the ripples of this running water, waiting for what Providence may send them in the way of provant. We propose to be their evil genius, and have brought the implements with us to betray them to their ruin. Sooner, dear reader, shall you catch Mercury without his caduceus than a veteran angler by a trout stream without his rod. Forth from thy well-worn case, old whipper of the brooks. Age has not robbed thy joints of their suppleness, nor, thank the Providence that shapes men's ends, has it yet taken the elasticity out of yours. *E pluribus unum;* the sections are one. It is easier to reconstruct a rod than a republic. Is not this a wand fit for the right hand of a naiad? a perfect taper from butt to topmost ring, light as a reed and springy as a rapier. This multiplier, too, is a masterpiece. Countless revolutions have not disorganized it, though it has immolated more victims than were ever guillotined in the Place de Gréve. It takes not the accustomed fingers of the angler long to prepare his tackle. At the end of the transparent

leader dangles a "brown hackle"—a killing fly when the sun is shining softly through the golden mist of noonday; and now for a cast. Seest thou, reader, that bit of ruffled water, this side of the gnarled, hump-backed old witch of a willow that is stooping to catch a glimpse of her ungainly shape in the stream? Right for the center of that little eddy shall our feather-fly make wing. Deftly done, by all that's entomological! Had the lure been alive it could not have dropped into the ripple more naturally. Aha! Credulity in a broidered coat snaps at the temptation.

A noble trout, a very emperor of the brook, and hooked past all redemption. Whir-r-r-r? how he makes the reel spin. See him dart from the surface, mad for freedom. Alas! lithe acrobat, thy last flip-flap is at hand. Thou'rt e'en a drowning, for fish may have "too much of water," as the fair Ophelia. It is mere folly to fight with destiny; be guided, come ashore, and die peacefully on the green-sward. We'll land him gently, "as if we loved him," as old Isaak says of the worm. There he lies, poor victim of overweening confidence, panting as a hart panteth after the water-brooks, and ever and anon making ineffectual leaps stream-ward. Canst tell us, reader, why a captured fish always jumps toward the water even when he can not see it? It is instinct, probably. But what is instinct? We have asked this question of philosophers, metaphysicians, and other far-seeing individuals, and, sooth to say, their replies, though eminently profound, were utterly unintelligible.

Pending the solution of the problem, let us continue to beguile the fishes. One after another, from pool and rapid and the whirling foam of fairy Minne-ha-has, we gather them in. The sun on his downward course is frescoing with prismatic hues the western wall of heaven, and the wicker basket at our belt is full of fish as rarely tinted. What shall we do with them? It were gross vandalism to consign them to the culinary mercies of the Maritornes of a village tavern. We have tried that before, and had our trout so bedeviled in the cooking that we hesitated to ask a blessing on them. Think of the sacrilege of frying brook trout in half-rancid dripping? It is rank heathenism. Why send

missionaries to the Fejee islanders when the choice gifts of the Great Provider are thus misused of pagans at home.

No! those self same denizens of the silvery streams shall be manipulated by our own hands, even at the brookside from which they were taken while sporting in the cool and limpid waters—their native element; and shall tickle our palate while reposing in the midst of umbrageous foliage.

We have really enjoyed it; camping away up among the streamlets, and have returned "edified and built up," our back is straighter, step firmer, hand steadier, head lighter than before we went into "the brush." The nymph Spring is not quite as forward as she was last year, but we happened to catch her in a melting mood, with a warm sun-flush on her cheek, and a very pleasant time we had together. Heaven's health commissioners—gentle breezes vitalized with the fresh breathings of tender grass unfolding blossoms —are very potent to preserve in their full vigor body and soul, and as we strolled hither along the highways and byways of nature's green sanitorium, it seemed to us as if the blue fiend Cholera were as effectually barred out of that sweet pleasaunce as if it had been guarded, like Eden of old, with flaming swords.—*San Rafael* (*Marin Co.*) *Journal*, June 23, 1866.

THE CHINESE EMBASSY BANQUET.

[Given by the leading citizens of California, at the Lick House, San Francisco, April 28, 1868, to Hon. Anson Burlingame and the Chinese Embassy.]

THE grand banquet arranged to be given by the leading citizens of California to Hon. Anson Burlingame and the other members of the Chinese Embassy, now in this city en route to the Atlantic States and Europe, came off last night at the Lick House. All the arrangements were in excellent taste, and the gathering was one of the most strictly representative ones ever convened in the State. The occasion was properly considered to possess an international charac-

ter, and besides those of our leading official and business men who were present, there were representatives, either official or commercial, of all the great powers of the world. It was felt that as the first embassy from China to the nations abroad chose California for their first halting-place outside of the Orient, its members were entitled to a greeting as broad and liberal as their mission.

MEMBERS OF THE EMBASSY.

The Embassy has now been in our city about a month. It is composed of Hon. Anson Burlingame, accredited Envoy Extraordinary and Minister Plenipotentiary from the Chinese Government to the Treaty Powers; Chih Tajen and Sun Tajen, Chinese Ministers; J. McLeary Brown, First Secretary of Legation; Monsieur E. de Champs, Second Secretary of Legation. With the above are six student interpreters, two of whom have studied and speak English with considerable facility, two have studied French, and two Russian; two writers, a native doctor, and about fifteen servants. Their Excellencies Chih Tajen and Sun Tajen are High Ministers of the second rank, attached to the Mission to learn and qualify themselves in the modes of diplomatic intercourse, and to assist Mr. Burlingame in his communications with the Chinese Government.

The distinguished party have had their head-quarters at the Occidental Hotel, where the Imperial Dragon of China has been kept flying from the flagstaff. They have been the recipients of many private hospitalities and attentions, have inspected all that was most interesting in the city and its surroundings, and have established friendly relations with a large number of our citizens. Hence they met at the banquet last night few strangers, and the gathering, while it was sufficiently ceremonious and decorous, had little of the cold formality that sometimes obtains on such occasions. It was altogether an enjoyable social episode, as well as a significant public event.

THE GUESTS

Numbered about two hundred and twenty-five, and included representatives of the United States Government, of the State and municipal governments, and of all the leading institutions and interests of the coast. Gov. Haight, as President of the occasion, sat at the middle of the main table, the chief members of the Embassy being seated at his right hand, contiguous to Mayor McCoppin, Henry Barroilhet, Consul of Peru; Don Jose A. Godoy, Consul of Mexico; G. C. Johnson, Consul of Norway and Sweden; William L. Booker, Consul of the British Empire; and S. F. Butterworth of the celebrated New Almaden mine. On the left of the Governor were Henry W. Halleck, General Commanding the Division of the Pacific; H. K. Thatcher, Admiral Commanding the American Squadron on this coast; Ogden Hoffman, Judge of the District Court of the United States for California; Delos Lake, District Attorney of the United States; Gen. McCook, United States Minister to the Sandwich Islands; Francis Berton, Consul of Switzerland; C. F. Mebius, Consul of Bavaria; James De Fremery, Consul of the Netherlands.

Beside the above were numerous other gentlemen connected with the army and the navy and with the civil administration of the country. Among the guests at other tables were Maj.-Gen. John F. Miller, Collector of the Port; R. B. Swain, Superintendent of the Mint; R. G. Sneath, President of the Chamber of Commerce; Thomas H. Selby, President of the Merchants' Exchange; Oliver Eldridge, agent, on this coast, for the Pacific Mail Steamship Company; ex-Governor F. F. Low; Judge Sawyer of the California Supreme Court; Judge Currey; Maj.-Gen. Rosecrans; Senators Hager, Tubbs, and Rose; Charles Meinecke, Bremen Consul; Charles E. Hitchcock, Hawaiian Consul; Alvinza Hayward; W. C. Ralston; ex-Congressman Howard, of Michigan; Brig.-Gen. Leonard; Eugene L. Sullivan; Alpheus Bull; James S. Pierce; Edward Tompkins; Newton Booth; A. P. Stanford, and many other well-known citizens. One table was largely occupied by

the leading Chinese merchants of this city, associated with some of their countrymen of the Embassy, and this party, with their rich national costumes, intelligent faces, and lively enjoyment of the occasion, were very much observed.

THE DINING ROOM.

The selection of the Lick House dining-hall was very happy. It is unquestionably the finest dining-saloon in the Union. Its size is 64 feet wide, by 87 feet long, and 32 feet high. At a height of 20 feet a gallery 8 feet wide is built, extending back from the main body of the hall, and communicating by numerous passages with the outer corridors. The ceiling of the hall is arched, with pendants at the corners. The walls are paneled, and the balcony arches or alcoves are supported by Corinthian pillars. The walls, ceiling and pillars are finished and ornamented in white plaster. Light is admitted through twelve large skylights of stained, ground and cut glass, surrounding three panels in the ceiling, from which depend elegant chandeliers lit with gas. The floor is a handsome mosaic of different colored woods. The doors are massive, and composed of elegantly polished woods. In the eleven main panels of the lower walls are as many oil paintings of Pacific coast scenery, each picture, with the frame, measuring seven by nine feet; while at the four corners are French-plate mirrors, nine by twelve feet in size. The paintings were executed by Thomas Hill, in a broad and effective style, and represent with much fidelity four scenes in the Yosemite Valley; one each of the Geysers, of Sugar Loaf Rock (on the Placerville route across the Sierra Nevada), of Fort Point, Seal Rock, Popocatapetl (in Mexico), and of Mount Hood, in Oregon. They were painted to order two years ago, just prior to Mr. Hill's departure for Boston, where he is now painting, but only placed in the panels last week. The frames are of a new style, devised and partly made by the owner of the house, Mr. Lick. They consist of outer and inner rounded moldings of rosewood, between which is a surface of plate-glass, showing an elegant scroll pattern in gold work on a black ground. A large

clock over the main entrance from the lower floor is similarly framed.

THE SCENE AT DINNER.

Beside the above ornaments none were added to the hall for the occasion of the banquet except a few flags of different nationalities, which were hung gracefully over the balcony arches and at the ends of the room, and a very tasteful disposition of fresh flowers in grateful profusion. The flags of China and the United States were hung together over the place occupied by the President and the Embassy. The numerous tables were ornamented with bouquets, a small one being in the glass of each guest. The room was filled with the delightful odor of roses, and brilliant with the flashing lights of the chandeliers reflected from the large mirrors. The paintings and flower-garlands gave an air of elegance to the walls. In the balconies were stationed the musicians, who gave at intervals during the evening a charming selection of airs on the piano and French horn. Mr. Schlotte, who is famous for his solos on the latter instrument, led the music. The opening quartette on French horns was admirably played, and the entire musical programme was performed with the nicest effect. The sounds were soft and soothing, and mingled with the hum of conversation without disturbing it. When the company were all met and were busy at the tables, the scene was a picturesque and animated one, and was made more picturesque by the unique costumes of the Chinese, the brilliant uniforms of the military, naval and consular representatives, and by the amiable intrusion into the balconies of a few ladies as spectators in the latter part of the evening.

The President of the banquet, Gov. Haight, called the company to order at the close of the repast, and announced the first regular toast of the evening, *The President of the United States*, to which Hon. Delos Lake responded in the following words :—

SPEECH OF HON. DELOS LAKE.

Mr. Chairman—The toast which has just been offered

will command the respect of every man who appreciates the dignity and importance of the office of Chief Magistrate of the Republic, and of none more than the accredited representative of the High Priest and Imperial Father of 370,000,000 of people. Never has the health of the President of the United States been proposed under more interesting or more gratifying circumstances. This sumptuous banquet is the expression of American gratitude for that liberal policy which has induced an empire whose authentic history begins three thousand years before the birth of Christ, and which, through all the intervening centuries, has preserved an almost unbroken isolation, to select as the interpreter of its thoughts and the exponent of its intentions a distinguished citizen of the youngest nation. The spectacle, regarded by that light which irradiates and reveals the future, is full of significance. Here the oldest and the newest civilizations have met together.

You, gentlemen of the Embassy, eminent at home and respected here, would ruffle the vaunted equanimity of your ancestors, could they rise from their tomb and behold you in this place surrounded by these associates. You have come from a land where for nearly five thousand years the unmixed race to which you belong has dwelt in busy and crowded seclusion, to a country at least twice as extensive as your own, capable of supporting a population of more than 800,000,000, and yet possessing less than one-tenth of the number of your own people; whose vast prairies and almost boundless forests were scarcely disturbed by human industry, when, in 1637, the first British ship reached the teeming city of Canton.

You come from a land whose language and literature are original and fixed, to a country whose language and whose literature are the cultivation of many ages and nations, and changeable as the civilization among which they exist. You have come from a land where the fifteen maxims of Confucius form the exclusive basis of morality and philosophy, to a country where all moral creeds consistent with the public safety are tolerated, and where systems of philosophy are born in a day and die in a generation.

You have come from a land where the imperial will, *advised* by the ancient "Len Lee" code, is the supreme law, to a country governed by a written Constitution, which can be altered by the people, and by laws made for every emergency, and various as the wants they are made to supply. You have come from a land where the supreme ruler represents the deities you adore, to a country whose officials are the creatures of their constituents, and before whose highest legislative body, without revolution, without commercial, financial, political, or social derangement, its executive head is now undergoing a trial which may terminate in his removal. You come, in short, from a land of extreme conservatism and intense realism, to a country of the most active progress and disturbing enthusiasm.

This meeting spans fifty centuries, and links together two extremes—each of which is without a parallel. Am I not correct, then, Mr. Chairman, in describing the occasion as extraordinary and auspicious? And when we consider the results which must follow the movement in which our eminent countryman is engaged, what prophet shall be bold enough to attempt their enumeration?

For nearly 200 years the East India Company monopolized commerce with China, and for years after their monopoly was broken the British continued to control that lucrative trade; but the enterprising spirit and matchless energy of our people have overcome the advantages which Great Britain thus obtained, and the tide is on the turn. In its relations with the Celestial Empire the United States is now placed on a level with the most favored nations, and its geographical position, and the line of palatial steamers established by American enterprise, soon to be followed by an oceanic telegraph and the completion of the Pacific Railroad, before long must render this continent the principal avenue of communication between Europe and Asia, and raise this metropolis of the Pacific to the loftiest height of monetary power.

Let us, then, here warmly acknowledge the honor which the Emperor of China has paid to our country and to our President. May the reciprocity of interests thus gener-

ously recognized be followed by an interchange of influences which shall contribute to the prosperity of both nations. May we appreciate and adopt the thrift, the industry, the patience, the fortitude, the veneration for age, the wise conservatism for which the Chinese are pre-eminent; and, through our efforts, may civilization complete its cycle by illuminating the land of its birth with all the gathered splendors of five thousand years.

At the conclusion of Mr. Lake's remarks, Gov. Haight read the second regular toast—*The Army of the United States.*

Major-General Halleck arose to respond, and after the applause which his appearance evoked had subsided, he spoke as follows:—

GENERAL HALLECK'S REMARKS.

Mr. President and Gentlemen—I thank you, in the name of my comrades of the army, for the complimentary toast just offered. On an occasion like this, and in this presence, I shall be excused for not speaking as a military officer. We are assembled to welcome the civil representatives of a foreign and friendly power—of a great nation with which we have a large and rapidly increasing commercial intercourse. I will, therefore, speak rather as a citizen, and as a Californian.

We all know that America derived its civilization from Europe, and that European civilization was in a great measure derived from Asia. This tide has for ages been flowing westward. The result is that men are much better acquainted with what is east than what is west of them. Europeans know more about Asia than we do about America; and the people of the Atlantic States are more familiar with Europe and European matters than they are with the capacities and wants of the Pacific States.

An amusing illustration of this occurred a few months ago. A high official in Washington—a very intelligent and able man—in complaining to me of the expenses of the military establishment on this coast, suggested that the

expenses might be reduced by establishing all the military posts in Arizona and Nevada on the banks of navigable rivers, where they could be supplied by water transportation. I could only reply that we had not yet discovered any navigable streams in the interior of Arizona, and that I knew of no river of that description running through the Sierra Nevadas. With this example before us, I think we Californians may be pardoned for some ignorance, and no little prejudice, in regard to the countries and people west of us.

Not many years ago these Asiatic nations were excluded from the pale of European international law. It was held by European statesmen—and the doctrine was defended by John Quincy Adams—that the Christian powers had a right to compel them to trade with us, in such articles and on such terms as we saw fit to dictate. Thanks to the liberal views of the present age, and to our increasing respect for independent nationalism, they are now held and treated with as having equal rights under the laws of international comity and commercial intercourse.

I regard this as one of the most important movements of modern times. It is already breaking down the barriers of Oriental and Occidental prejudice; and it will eventually lead to the harmony and civilization of the world. And for this we are, in no small degree, indebted to the official acts of our distinguished guest and his diplomatic associates.

Standing, as we do here, on the extreme western verge of our Republic, overlooking, as it were, the coast of Asia, and occupying the future center of the trade and commerce of the two worlds, this matter is of great and almost paramount importance to us. If that civilization which has so long moved westward with the star of empire is, now purified by the principles of true Christianity, to go on round the world till it reaches the place of its origin, and makes the Orient blossom again with its benign influences, San Francisco must be made the abutment, and international law the bridge, by which it will cross the Pacific Ocean. The enterprises of the merchants of California have already laid the foundations of the abutments, and diplomatists and

steam and telegraph companies are rapidly accumulating materials for the construction of the bridge.

GOV. HAIGHT'S SPEECH.

The object of this festival is the proper commemoration of a great historic event, and to welcome in this first landing place in the territory of the United States a distinguished gentleman, your guest, who is on his way to represent the Chinese Empire at the capitals of America and Europe. The event to which I refer is one of those which mark a step forward in human progress, introducing, as it does, an empire, one of the oldest, if not the oldest, of all that exist on the globe, into the great family of nations.

For centuries this people has remained almost entirely excluded from intercourse with Europe and America. A wall of separation has prevented them from contact with the civilization, arts, commerce, polity, and religion of the Western World. Mercantile enterprise and religious devotion have vainly sought to overthrow the barriers which a jealous spirit of seclusion has erected and maintained against contact with those who were regarded by the people of that empire as outside barbarians. The antiquity of Chinese civilization, the perfection to which many of the arts have attained among the people, the value of some of their agricultural products, especially that far-famed herb that "cheers but not inebriates," their lack of knowledge of the religion of the Bible, have all operated as powerful incentives to efforts, both selfish and unselfish, to open the door to freedom of trade and interchange of products and ideas with the people of that vast empire. While opinions differ upon the question of immigration and other subjects, there is and can be no difference of opinion upon the desirableness of unrestricted commercial intercourse with China, and with all the nations of the earth. To us in California the appointment by that Government of an American citizen, as its organ of communication with the Western Powers, is an event of peculiar interest. The discovery of gold here, and the consequent rush of adventurous emigration across the plains and mountains have brought the oldest

and youngest of nations face to face on opposite shores of this great ocean.

The young, impulsive, progressive civilization of America comes in direct contact with the ancient, venerable, and peculiar civilization of Asia. Events, some of which are, perhaps, not creditable either to China or to Europe, have culminated in unlocking the Chinese mind from the fetters in which it has been bound by centuries of exclusion from Caucasian progress, until we see the remarkable spectacle of a citizen of our young Republic selected as the bearer of offers of commerce and amity between the Eastern and Western World.

I will not attempt, at this time, to picture the grand results which I trust will flow from this auspicious event, not merely to America and to Europe, but to China and to mankind. I see in the near future a vast commerce springing up between the Chinese empire and the nations of the West; an interchange of products and manufactures mutually beneficial; the watchwords of progress and the precepts of a pure religion uttered to the ears of one-third of the human race hitherto resisting, with the inertia of a dead weight, all progress, material, political, social, or spiritual.

As Chief Magistrate, then, of this Western State of the Union, I welcome you, sir, as the Embassador of that vast empire, to the territory of the Republic which you are still proud to call your native land. I doubt not you have accepted a great and sacred trust in no selfish or narrow spirit, either of personal advantage or of seeking exclusive privileges for our own, over other nations, and so, in the name of commerce, of civilization, of progress, of humanity, and of religion, on behalf not merely of California, or America, but of Europe and of mankind, I bid you and your associates welcome and God-speed.

SPEECH OF HON. ANSON BURLINGAME.

Gov. Haight read the following toast:—"*Our Guest—The son of the youngest and representative of the oldest*

Government," and announced that Hon. Anson Burlingame would respond.

As Mr. Burlingame arose, the entire company stood up and greeted him with three cheers, which made the banquet hall tremble. He said :—

Mr. President and Gentlemen—In rising to respond to the sentiment which you have just done me the honor to propose, I feel a weight of responsibility such as never before pressed itself upon me. I stand between two civilizations, now for the first time, by their representatives, face to face, and, belonging to one, I am called upon to respond for the other. The situation is a novel one, and my sincere desire is that I may be able to meet it in such a manner as not to put at hazard the great interests which have been confided to me. I shall ask your indulgence, therefore, and your generous construction of the language I may use. This is not the time nor the place to enter upon an exposition of the purposes of the mission. Until it shall have been received at Washington, it seems to me that diplomatic propriety requires that it should limit itself to the exchange of such official courtesies only as it shall meet in its way. In this sense, then, I respond to the sentiment which has been offered. In this sense, then, Mr. Chairman, do I respond to your own eloquent language, and to this decorous and imposing reception.

I say that this is not the time nor the place on which to enter into any exposition of the purposes of the mission. Not because there is little to say, not because there is any mystery about the mission. No, sir! There is nothing in its origin that I should not be glad to tell you; there is nothing—no one purpose of it—that I should not be ashamed to conceal. It came to me unsolicited; it was accepted in the broad interests of civilization. You said truly, sir, when you said that the mission would not be used by me in any partial or limited sense. If I know myself, it shall be conducted only in the interests of all. This mission is not the result of any accident, or of any special design; it is the result, the legitimate consequence, of events which have recently occurred at Pekin, the capital of China. It was

not until recently that the West was brought into proper relations with that empire. Previously, affairs went on upon a system of misunderstandings, resulting in mutual misfortune. It was not until the year 1860 that the representatives of the Treaty Powers met the great men who carry on the affairs of the Chinese empire, and coming into personal relations with them, they had occasion to modify their views as to the capacity and as to the intentions of those men. And they were led straightway to consider how they should substitute, for the old false system of force, one of fair diplomatic action. They addressed themselves resolutely to the discussion of that question, and that discussion resulted in the adoption of what is called the co-operative policy, which is briefly this: An agreement on the part of the Treaty Powers to act together upon all material questions; to stand together in defense of their treaty rights; and the determination, at the same time, to give to these treaties a generous construction; a determination to maintain the foreign system of customs, and to support it by a pure administration, and upon a cosmopolitan basis; an agreement to take no concessions of territory to the Treaty Powers, and never to menace the territorial integrity of China. These agreements are at the foundation of the co-operative policy. You will perceive that they leave China perfectly free to develop herself in precisely such form of civilization as she may desire—at such time and in such manner as she pleases. It leaves her waters under her own control, and her lands safe.

Such, in brief, is the co-operative policy. I do not propose here to-night to speak of the protracted discussions which led to that result. I did not intend—and it would be improper to do so—to speak of the action of the living in this regard, but I would speak of the dead. There is one who is identified with that policy, and with the establishment of justice in China, who ought never to be passed over in silence or forgotten—Sir Frederick Bruce, the late British Minister at Washington. That great man, recalling the traditions and the practices of his own country, said that they jarred upon the moral sense of England, and that

he was ready upon his own responsibility to reverse them. He was ready to lead against them, and he did lead against them, so fairly and so ably, as, in the first place, to win the respect of his colleagues; in the second place, to win the support of his country, and in the third place, to win the admiration of the diplomatic world.

It is not time yet to speak at length of the results of that policy. I can not foretell the future; I can only speak to some extent of the recent past. And as I do so, I must aver that that policy has borne rich fruits. Under its inspiring influence commerce has sprung into being; trade has increased from $82,000,000 to $300,000,000; steamboats have been multiplied; arsenals have been built; light-houses have been erected; hundreds of foreigners have been taken into the service of China, under the leadership of one of the ablest men in the world. This flag which is above us (the imperial flag of China), has been adopted as the first national flag of China. Wheaton's International Law has become and is taken as a text-book for that great empire. The influence of Christian missions has been advanced from the Yellow Sea even to the great plains of Mongolia, and a great college has been established at Pekin, where foreign or modern science is to be taught, as well as the foreign languages—a great college which will be looked up to by the eleven thousand students of China who go up every three years to Peking to take their third and fourth degrees, and to look, as they term it, into the mirror of the mind, to see what it has to reveal to them. And finally, as a result, I think directly, of that fair and generous policy, it has sent this mission forth on its errand of good will. As I have said, I will not speak at length to-night of its purposes. I must reserve myself for questions as they arise; but this I will say, Mr. Chairman and gentlemen, that this mission means progress. It means that China desires to come into warmer and more intimate relations with the West. It means that she desires to come under the obligations of that international law of which you, sir [General Halleck], are one of the ablest exponents, to the end that she may enjoy the advantages of that law. It means that China, conscious

of her own integrity, wishes to have her questions stated—that she is willing to submit her questions to the general judgment of mankind. It means that she intends to come into the brotherhood of nations. It means commerce; it means peace; it means a unification in its own interest of the whole human race. It means—as you have said here to-night—that it is one of the mightiest movements of modern times. And though this ephemeral mission may pass away, that great movement will go on. The great deed is done. The fraternal feeling of 400,000,000 people has commenced to flow, through the land of Washington, to the older nations of the West, and it will flow forever. Who is there that would check it? Who is there that would say to China, "We wish to have no other relations with you than such as we establish in our own interests, and enforce at the cannon's mouth?" I trust there are none such. I believe, rather, that this fraternal meeting is the true exponent of the sentiments of the masses of the people. I believe this occasion reflects more truly that enlarged spirit which is not alone devoted to trade, but also to civilization and progress—that great and liberal spirit which would not be content with exchanging goods with China, but would also exchange thoughts with her; that would inquire carefully into the causes of that sobriety and that industry of which you, sir [Governor Haight], made mention; that would learn something of the long experience of that people; that would question those institutions which have withstood the storms of time as to the secrets of their stability; that would ask what means that free competition by which the son of the lowliest coolie may rise to the highest office in the empire; and makes scholarship the test of merit; that does not believe that genius is dead in the land of Confucius; that does not believe the powers of the mind shall no more be kindled and burn on the soil beneath which rest the bones of the inventors of porcelain, of gunpowder, of the compass, of paper and printing. That does not believe the Christian's hope should cease to bloom where the Christian martyrs fell. Ricci, Verbrest, Schaal, Morrison, Milne, Bridgeman, Culbertson, and a host of others

lived and labored, and died, praying and hoping that the day would arrive when that great nation would stretch forth its arms toward the shining banners of Christianity and Western civilization. That hour has struck—the day is here.

I will not, for my strength will not permit it, pursue these enticing themes. I will rather return to the first purpose of my rising, which was to return, for myself and my associates, our sincere, our grateful thanks, for this cordial, this magnificent greeting. It does honor to California; it makes me proud of the State of my adoption. Not because it is the reception of a few individuals. No! But because it is a warm welcome to a great cause. I assure you that in all my wanderings, the sweetest memories which will come up to me, along with the recollection of your bright skies, your golden fields, and your measureless hospitalities, the pleasantest, the dearest recollections that will come up to my mind will be those of this night, when California, speaking through the lips of her eloquent Chief Magistrate, and the other eloquent gentlemen who have spoken—through these representatives of your "solid men," without distinction of party—has given a generous and fearless reception to the first mission sent forth by one-third of the human race to the nations of the West. And now, thanking you for this generous greeting, I bid you an affectionate farewell.

At the close of Mr. Burlingame's eloquent speech the hall again resounded with prolonged cheering and applause.

SPEECH OF CHIH TAJEN.

Governor Haight next read the sixth regular toast:—

"*Their Excellencies, Chih and Sun, and the Junior Members of the Mission.*"

To which Chih Tajen responded. He read from manuscript in his own language, and the interpreter of the Embassy then gave the translation as follows:—

Honorable Governor—I do not rise with the intention of adding any thing to what Mr. Burlingame has said in reply to the toast of this mission, of which he is the responsible

chief. I would only beg to express for myself, my colleague, Sun Tajen, and the attachés of the mission, our sincere thanks not only for the cordial reception we have received from you this evening, but also for the more than kind attentions that have been paid us since our arrival in San Francisco. We can not but look upon our passing sojourn in California as a most auspicious and cheering commencement of our diplomatic tour. In the case of a pioneer mission such as this, it is plain that success or failure must depend in a great degree on the character of the persons to whose charge it is intrusted; and the Government of China is fully sensible of the rare advantage it has had in being able to place at the head of this, its first mission to foreign Powers, a diplomatist of Mr. Burlingame's position and ability. With him to lead us we need fear no failure; and my country will have cause to congratulate herself, if this, her first step toward closer intercourse with other nations, be as prolific of good results for her, as your efforts and labors in California have been in attaining to such a pitch of prosperity in the short period of eighteen years.

In conclusion, I would, with permission, say a word to my own countrymen resident in California. Gentlemen, Directors of the Six Companies—I address you, and through you all our fellow-countrymen in the State. It has given me great pleasure to meet you in this distant land, and to learn that you are prosperous in your several callings. On leaving Pekin I was charged by his Majesty, our august Emperor, to assure you of his affectionate interest in your welfare. It is his Majesty's hope that, though living in a distant land, you will ever strive, by your conduct, to uphold the respectability and good name of your native country. To do so, let me urge you not to forget the precepts which have been handed down from age to age by the wise and good men of China. Do not fail to pay due regard to the requirements of the various social relations, and neglect not your moral duties as men. Be careful to obey the laws and regulations of the nation in which you reside. If you do so, and at the same time pursue your callings in accordance with the principles of right and propriety, success can

not fail to attend your labors; while a contrary course will infallibly bring on you failure and misfortune.

I feel confident that you will show yourselves, by your good conduct, worthy of his Majesty's affectionate interest in your welfare, and will not disappoint the good opinions I have been led to form of you.

LETTER FROM HON. EUGENE CASSERLY.

The seventh regular toast was to have been responded to by Hon. Eugene Casserly, but he was not present, and sent the following letter as expressive of his sentiments:—

Messrs. T. H. Selby, O. Eldridge, R. B. Swain, A. Bull and others, Committee of Invitation—GENTLEMEN: I am much obliged for your invitation to attend a dinner at the Lick House on Tuesday evening, the 28th inst., to Hon. Anson Burlingame, Embassador for China, &c.

I regret to have to deny myself the pleasure of meeting Mr. Burlingame and the other gentlemen at the dinner. Allow me, however, to make in this way a few general observations on the purpose of the mission.

From the want, perhaps, of a just perspective we are prone to estimate untruly the events of our own time. Yet when an empire on the other shore of the Pacific, which is the oldest in the world, and which includes within its sway nearly one-tenth of the habitable globe and more than one-third of its population, steps out from its seclusion of centuries, and of its own will tenders to the nations of the earth the relations of commercial intercourse, the event would seem to be not only of historic interest generally, but of marked present importance to some countries, and to our own at least as much as to any. That the selection for the head of this mission of a distinguished American, many years our Minister at Pekin, was a tribute not only to the general candor, justice and humanity of our American policy and diplomacy in China, but also to the personal qualifications of Mr. Burlingame himself, may be, without impropriety, assumed by us, since it has been frankly conceded in European quarters of least friendly disposition toward

American progress in the East. Whether it has any specially favorable significance toward the United States in future negotiations, it is perhaps not for us to say.

This much, it certainly authorizes us to expect that we will stand on equal ground with the most favored nations. We ask no more. In the contest for that Eastern trade which has always heretofore been thought to carry with it the commercial supremacy of the globe, America asks only a fair field even as against her oldest and most formidable rival.

Nature, and our position as the nearest neighbor of Eastern Asia, separated from her only by the great highways of the ocean, have placed in our hands all the advantages that we need. Whatever benefits shall result to the world at large, from any great extension of its commercial relations with that country, a full measure of them must of necessity fall to our share, increasing with each succeeding year. Favored by vicinity, by soil and climate on our own territory, with a people inferior to none in enterprise and vigor, without any serious rivalry anywhere, all this Pacific coast is naturally ours, or is our tributary. With our many and growing lines of steamships thrown out in every direction, and on every route; with our flag in every port, and our enterprise on every shore, from Panama to Alaska, we hold as ours the great ocean that so lately rolled in solitary grandeur from the equator to the pole. In the changes certain to be effected in the currents of finance, of exchange, and of trade by the telegraph and the railway, bringing the financial centers of Europe and the United States, by way of San Francisco, within a few weeks of the ports of China and the East, San Francisco must become, at no distant day, the banker, the factor, and the carrier of the trade of Eastern Asia and the Pacific, to an extent to which it is difficult to assign limits.

On this coast, and especially in this State, labor, we rejoice to say, is a more important interest, has a better position and a more just return than elsewere in the world. Our democratic representative institutions rest too, on a basis of extended suffrage, and general political equality.

For these and other reasons sufficiently well-known, it should not be matter of surprise here or elsewhere, that there is a strong settled feeling among us as to the movements hitherward of those countless myriads, industrious, active, and migratory—compared to which the whole population of this coast is not a handful—from the shores of China, not farther removed from us to-day than were the great hives of European immigration from our Atlantic sea-board thirty or forty years ago.

Whatever may be the diversity of opinion on this point, there can be none whatever as to the great special advantages to this State and coast of commercial relations on an extended and permanent footing with Eastern Asia and all other neighboring countries on either shore of the Pacific.

With commercial relations comes commerce, and of commerce we can not well have too much.

I am, gentlemen, very respectfully, your friend and servant. E. CASSERLY.

SAN FRANCISCO, *April* 28, 1868.

REMARKS OF EDWARD TOMPKINS.

In the absence of Mr. Casserly, the President called on Edward Tompkins to respond to the toast. Mr. Tompkins said:—

He must be a bold man who would venture to occupy the place of the Senator elect, but somebody must step into the breach, and he might as well as another. The toast—The Republic of Nations, the United States of the World—is a theme so vast and suggests interests so boundless, that weeks of reflection would not enable a man to grasp all its bearings. Nations will need a vast amount of reconstruction before they are all bound together in one Union. Asia will need to be made almost anew. Perhaps it may be thought that Africa is reconstructed already.

"We see," said he, "in nations the impulses that mark individuals. One-half the human race remain in the old homestead of the Asiatic continent, sticking to the old soil and to old ideas; while the other, ages ago, started out on a

prospecting expedition, and they have kept on going west until they have got so uneasy that some of them, especially in New England, are never satisfied so long as they see a dollar that they have not caught, or a rod of land that they have not annexed. And now they have got so far west that almost without thinking of it, they are about getting over on the old homestead again. They are now piling themselves up on the shore of the Pacific, waiting for the steamboat or bridge that is to carry them across. And here they are met by a counter-current, by a phenix, by something that was never seen before, a Yankee Mandarin, with ever so many tails, but tell-tale is not one of them. He has fine powers of saying a great deal and meaning but little. Our Yankee curiosity was not entirely satisfied by his speech —warm, generous, humanitarian though it was. We tried the pumping process, but did not succeed. When he came to business he was dry, very dry. He has determined to tell nothing about that till he gets to Washington, but we could guess commerce would come along this way on the track of the mission and back; and if it did, San Francisco would certainly collect toll both ways.

This Embassy looks as though the Old World were ready to do away with many old rules and prepare for the United States of the World if we should take the lead; but are we ready to welcome them? It is well to say so, but before we can say so truly, the day must come when the good man need not blush among us for his own countrymen when the question was asked, Who are the heathen? That question was asked the other day by a leading journal. If the world is to be liberalized, will we do our part? When the Great Wall of China is crumbling, will we try to use the material anew in the interest of progress, or will we try to make it a ruin? Shall we meet the Asiatics as brothers, or as enemies to whom we owe neither justice nor kindness? There is much to encourage us on the other side of the Atlantic. New ideas are gaining ground. The great statesman of Berlin has merged twenty petty States in one large one. Diplomatists see the current

of the world's progress, and are playing their games in unison with it. And this great mission, in harmony with the spirit of the age, stepping at once into greatness, is an evidence of the awakening of the great Asiatic nation to the unity of the interests of mankind. In closing my remarks, I give you a sentiment :—

"The world's new day—the field of the cloth of gold is the whole earth; the unity and elevation of the race the object it secures."

Eighth regular toast—"*Tea: The cup that cheers but not inebriates.*"

RESPONSE OF NEWTON BOOTH.

I trust, Mr. President, there is no insinuation in the sentiment you have just read, that there are cups here which might both cheer and inebriate. There is nothing personal in it, is there? Are we not all teetotalers? Certainly, we know too well the distinction between a tea-cup and a hiccup, to be any thing else.

I remember an anecdote of Tom Corwin—that he was once at a country tavern, and the landlady, thinking she must use all her dictionary words in the presence of so great a man, asked him, at the supper-table, "if he took his tea with condiments." Tom instantly replied, "Pepper and salt, if you please, madam, but no mustard."

Ah! if he were only here how he could flavor this particular cup of tea you have sent to me "with condiments"—with salt, attic salt—with the most pungent spice of wit, with the finest aroma of humor, until it would become such a cup of tea as never was tasted before. But, alas! "poor Tom's a-cold."

If there be any thing in the doctrine, Mr. President, that the thought and literature of a people are greatly influenced by what they eat and drink, who shall be able to estimate the obligations the world is under to tea? Take, for example, a great poem, a great speech, a great book, who can analyze it and say what portion is due to the brain-power of the author, and what to the kindly beverage that inspires, sustains, and soothes him; or consider, what is still better,

because wider and deeper, the great current of common life, who can calculate how much its course is influenced by the millions of throbbing hearts which are its sources; and how much by the home tea-tables, which are its kindliest guides? I should like to argue that the pure teachings and inspired philosophy of Confucius were due in part to tea, but, unfortunately for that hypothesis, Confucius lived five hundred years before Christ, and tea did not become a national beverage among the Chinese until eight hundred years after. Yet I am not sure that is not consistent with the theory, and does not add to its dignity. It was a triumph of the spiritual over the material. It was the prophecy of thought. Tea existed as a type and verity in the mind of Confucius, which it took thirteen hundred years to realize as a fact and actuality. That is metaphysics. Do you understand metaphysics, Mr. Chairman? I don't. What I am trying to say is that the teachings of the great philosopher so molded the minds and characters of his countrymen that tea became a necessity of their natures, and its cultivation their continual delight.

And, sir, may not the invention of printing, the manufacture of gunpowder and paper by the Chinese, centuries before the Europeans attained those arts, be due to the fact that the Chinese were a nation of tea-drinkers eight hundred years before it was introduced into Europe?

The first notice of tea by a European was by the traveler Marco Polo, in the thirteenth century. In the sixteenth century it was brought into use by the Jesuit missionaries. It had to fight its way. The dames of Old England, for some time, clung resolutely to sage, and in New England it had a battle royal with the combined forces of sage, sassafras, and camomile. The introduction of tea into England has been attributed to Queen Catherine, of Braganza. Waller, the Court poet of that day, in some verses addressed to the queen, says:—

"Venus her myrtle has, Phœbus his bays:
Tea both excels, which she vouchsafes to praise.
The best of queens, the best of herbs we owe,
To that bold nation which the way did show

To the fair regions where the sun doth rise,
Whose rich productions we so justly prize."

In 1635, a traveler, and the secretary of an embassy, by the way, after describing the wonderful virtues attributed to tea in the East, naïvely adds: "But this herb is now so well known in most parts of Europe, where many persons of quality use it with good success, that it must needs be known what are its good and bad qualities."

No wonder its use was confined to "persons of quality," for years afterward the price in England ranged from £6 to £10 per pound—allowing for the difference in the value of money, equal now from $100 to $300 in gold. Thanks to free commercial intercourse, the price is cheaper and its use more general now.

The first mention of tea in any act of Parliament was in 1660. The East India Company long enjoyed a monopoly of its importation. Once the Chinese endeavored to organize a counter monopoly of its importation, whereat the East India Company was filled with virtuous indignation, and fulminated against the imposing of fetters upon trade—by the Chinese.

Lecky, in his "History of Rationalism," attributes important effects on modern civilization to the introduction of tea and coffee into Europe in the sixteenth century. After speaking of the clubs formed in France, he says: "The effect of hot drinks upon domestic life has been even greater in England than on the Continent; checking the boisterous revels that had once been universal, and raising woman to a new position in the domestic circle, they have contributed very largely to refine manners, to introduce a new order of tastes, and to soften and improve the characters of men." There is one phase of the influence of tea on our civilization society has not mentioned, and I will not discuss lest the topic prove interminable—I mean the tea-party. There is one memorable tea-party, however, I would like to refer to. I do not mean that at which Mrs. Grundy perpetually presides, but a certain famous tea-party that was held in Boston harbor nearly a hundred years ago. I have long thought, Mr. President, that Mother England had studied the char-

acters of our grandmothers, and sought to tempt them on their weakest side. It would have been no sacrifice to refuse jim-cracks and gew-gaws, but it was not in human nature to suppose they would forego their tea. Shall we ever sufficiently admire the more than Spartan courage with which they turned from charming Young Hyson and delightful Bohea, betaking themselves to sage and sassafras—resolved to drink it out on that line, if it took all the summers and all the winters of their dear precious lives? Blessings on our grandmothers! I should like to drink to their memory in a cup of real Congo. If I should attempt to in any thing stronger, and spirits can rap, they would set these glasses ringing and dancing to such music as we never heard before.

It was not much tea the colonies required a hundred years ago—one or two cargoes a year, and not large ones. Now, if I mistake not, the United States import about forty million pounds annually, and Great Britain about eighty million. What the total export of China and Japan is, I know not, but when I think of this great river of tea, which, having its source in the East, flows round the whole earth, through all lands—of the homes it gladdens, of the hearts it cheers, of the spirits it refreshes, I would wax eloquent if I could. Not the vintage of Burgundy, not bright Tokay, not old Falernian, ripened in the cellars of Macænas, not the waters of Helicon, have inspired so much eloquence and song, nor a hundredth part of the kindly sentiment which is the true poetry of common life, as home-brewed tea. Oh! fondest recollections of home—cheerfulest joys of the fireside! Oh! full contentment of friendship—overflowing bliss of love! Oh! brightest stars of solitude that gleam upon us in the sweet hours of revery, when the earth sinks beneath our feet, and the heaven of dreams enfolds us in its heaven of heavens—how do the association of all these cluster around the fragrant cup of tea!

Blessings on old China for the gift! Old! She was old when the walls of the Eternal City were built; when the foundations of the Pyramids were laid. And still she stands, the apostle of the past, to watch the flight of the centuries

and count the mutations of human affairs. Not of her can it be sung:—

> "The Niobe of nations—there she stands,
> An empty urn within her withered hands."

She is no Niobe—her children are not dead. Her children are the arts, and they are immortal. Like the children of the fairy tale—infants at home, they are giants abroad. She holds no empty urn—but a tea-urn, full and exhaustless—and all nations send their ships to be her cup-bearers. Whatever may be the king, tea is the queen of commerce, and reigns by the divine right of blessing dispensed to all her loving subjects everywhere.

REMARKS OF MR. BOOKER.

The ninth and last regular toast, "*The Foreign Consular Body of San Francisco*," was responded to by H. B. M. Consul, Mr. Booker. He said:—

Mr. President and Gentlemen: It is gratifying to me to respond, on behalf of my colleagues, this evening, to the toast with which you have honored the consular body. It must be gratifying to you that your distinguished guest this evening is your fellow-citizen; and it must be gratifying to him that he is sent as an envoy to his own country. He will be received by all the Treaty Powers on the Atlantic side with enthusiasm, and the Chinese gentlemen associated with him will have an opportunity to study all that can be seen, and they will appreciate the advantages that will result to their nation from the opening of the country to foreign civilization. The mission itself is a civilizing expedition. Although China has been civilizing herself steadily for twenty centuries, the civilization of Europe, and lately of the United States, has gone far ahead; and the arts of the West are as strange in the East as if their rudiments had never gone from that source. My thanks are due to the gentleman for his eulogy of the late Sir Frederick Bruce, than whom, a purer man never lived, or was more regretted at his death. Without arrogating to myself any thing as an Englishman, I think it speaks much (to those who knew him) for Mr. Bur-

lingame, that he was the friend of Sir Frederick Bruce. On behalf of the consular body, I thank you for the honor done us this evening, and we trust that this embassy will be received everywhere in high official circles with the favor which its good purpose merits.

The last toast of the evening—"*The Fellowship of Commerce, the free trade of nature; it makes the whole world akin*"—was responded to by Hon. William A. Howard. He enlarged upon the relations of commerce to civilization, commented upon the importance of inland no lest than of foreign commerce, complimented the energy of our people, and indulged in glowing anticipations of the future of San Francisco, which he predicted would yet be the largest American city on the largest ocean of the world; and closed amid hearty applause.—*S. F. Bulletin*, April 29, 1868.

KNIGHTS OF THE QUILL.

DRIVE the quill quicker!—*faster* drive
Its bleeding point; and harder strive
With lagging brain
Benumbed by the pain
Of lightning thought!
Tug at your hair in frantic haste;
Not a single *moment* to waste—
An idea to lose,
Or chance to abuse.
Your time is bought!

Bought for the public—public men
Are *made* by ink-tears from your pen!
Bought for the public—public *taste*
Is born (as words) of ink you waste!
Bought for the public—public *weal*
Demands the flow from ink-tipped steel!
Bought for the public—bought, and oh!
Too often bringing purchased *woe!*

Drive the quill faster!—*quicker* drive
Its weeping point; but *harder* strive
To suck and to drain
From the muddled brain
Some nobler thought!
Think how the scratching, screeching quill
Can work such *good*—can work such *ill!*
Let each drop you waste
In your inky haste
Cry: *Life is short!*

—*S. F. Mirror*, August 6, 1860.

POWER OF SEA-BREAKERS.

FROM experiments which were made some time since, at the Bell Rock and Sherryvore light-house, on the coast of Scotland, it was found that the force of the breakers on the side of the German Ocean may be taken at about a ton and a half upon every square foot of surface exposed to them. The Atlantic breakers fall with double that weight, or three tons to the square foot; and thus a surface of only two square yards sustains a blow from a heavy Atlantic breaker equal to fifty-four tons. In November, 1824, a heavy gale blew, and blocks of limestone and granite, from two to five tons weight, were washed about like pebbles at the Plymouth breakwater, in England. About three hundred tons of such blocks were borne a distance of two hundred feet, and up the inclined plane of the breakwater, carried over it and scattered over it in various directions. A block of limestone, seven tons weight, was in one place washed a distance of one hundred and fifty feet. Blocks of three tons weight were torn away by a single blow of a breaker, and hurled over into the harbor, and one of nearly two tons, strongly trenailed down upon a jetty, was torn away and tossed upward by an overpowering breaker.

REMARKABLE ESCAPES OF EMINENT MEN.

SOME years ago, a young man holding a subordinate position in the East India Company's service, twice attempted to deprive himself of life by snapping a loaded pistol at his head. Each time the pistol missed fire. A friend entering his room shortly afterward, he requested him to fire it out of the window, it then went off without any difficulty. Satisfied thus that the weapon had been duly primed and loaded, the young man sprang up, exclaiming, "I must be reserved for something great!" and from that moment gave up the idea of suicide, which for some time previous had been uppermost in his thoughts. That young man afterward became Lord Clive.

Two brothers were on one occasion walking together, when a violent storm of thunder and lightning overtook them. One was struck dead on the spot, the other was spared; else would the name of the great reformer, Martin Luther, have been unknown to mankind.

The holy St. Augustine, having to preach at a distant town, took with him a guide, who, by some unaccountable means, mistook the usual road and fell into a by-path. He afterward discovered that his enemies, having heard of his movements, had placed themselves in the proper road with a design of murdering him.

Baron, the sculptor, when a tender boy of five years old, fell into a pit of a soap-boiler, and must have perished, had not a workman, just entering the yard, observed the top of his head, and immediately delivered him.

When Oliver Cromwell was an infant, a monkey snatched him from his cradle, leaped with him through a garret window, and ran along the leads of the house. The utmost alarm was excited among the inmates, and various were the devices used to rescue the child from the guardianship of the newly-found protector. All were unavailing; his would-be rescuers had lost courage, and were in despair of ever seeing the baby alive again, when the monkey

quietly retraced its steps and deposited its burden safely on the bed. On a subsequent occasion, the waters had well nigh quenched his insatiable ambition. He fell into a deep pond, from drowning in which, a clergyman, named Johnson, was the sole instrument of his rescue.

At the siege of Leicester, a young soldier, about seventeen years of age, was drawn out for sentry duty. One of his comrades was anxious to take his place. No objection was made, and this man went. He was shot dead while on guard. The young man first drawn became the author of the *Pilgrim's Progress*.

Doddridge, when born, was so weakly an infant, he was believed to be dead. A nurse standing by fancied she saw some signs of vitality. Thus the feeble spark of life was saved from being extinguished, and an eminent author and consistent Christian preserved to the world.

John Wesley, when a child, was only just preserved from fire. Almost the moment after he was rescued, the roof of the house where he had been fell in. Of Philip Henry a similar instance is recorded.

John Knox, the renowned Scotch reformer, was always wont to sit at the head of the table, with his back to the window. On one particular evening, without being able to account for it, he would neither himself sit in the chair nor permit any one else to occupy his place. That very night a bullet was shot in at the window, purposely to kill him; it grazed the chair in which he sat, and made a hole in the foot of a candlestick on the table.

Many years have now elapsed since three subalterns might have been seen struggling in the water off St. Helena; one of them peculiarly helpless, was succumbing. He was saved, to live as Arthur Wellesley, Duke of Wellington.

The life of John Newton is but the history of a marvelous deliverance. As a youth he had agreed to accompany some friends on board a man-of-war. He arrived too late: the boat in which his friends had gone was capsized and all its occupants drowned.

REMARKS ON HELL, BY HENRY WARD BEECHER.

WILL say a few words this evening in reply to the following letter which I have received:—

"Will you please tell me, in your Lecture-room Talks, published in the *Independent*, what you mean by *hell* and *future punishment?* My mind is yearning for something higher and more spiritual; but, before I can advance any further, I must have these terms explained by a liberal Christian man."

By the term *hell*, as it is popularly used, we mean—or *I* mean—that state in which, after this mortal life, the incorrigibly wicked are left to their own suffering and punishment. If you ask me the meaning of the original word—*hades*—I reply, that means that state of the dead which immediately succeeds this life and the one that is to come. Or, if you ask me what *hell* means in the ordinary usage, and in my usage, I reply, that it means the state in which the incorrigibly wicked are herded together, and suffer the legitimate result of their wickedness. I need not, therefore, answer the second question as to the meaning of *future punishment.*

There has been a mode of presenting the doctrine of future punishment, and there has sometimes been a spirit employed in the use of it as a motive, which have been repulsive, not to say shocking. Not only have we received this doctrine as it has come down to us, clothed with material figures and illustrations, but these figures and illustrations have been magnified and worked up until the doctrine, as it is presented by human interpretations and expositions, is simply horrible.

It has been supposed that death was one vast slaughter-house of torment, where wretched, hopeless and helpless creatures, for the sins of life, were, by every conceivable method of exquisite physical pain, badgered and beaten about in an endless gyration of suffering. Look at the "Inferno" of Dante, as an exposition of the prevalent

opinions of his day. Look at the "Last Judgment" of Michael Angelo, as an exposition of the physical ideas of torment of his day, where devils are gnawing the skulls of the damned; where men are pitched about on forks; where all possible modes of bodily distress are grossly, savagely, hideously complicated. And consider these as presentations of a state of government under which Christ is the manifestation of God!

This extreme materialism, this utter barbarity of the ideas which have so widely prevailed respecting future punishment, has been one chief reason of the modern reaction that has taken place on that subject. Then we have not, perhaps, made the matter much better by the arguments derived from the world of moral government, which we have advanced to justify future and eternal punishment, and which seem not to be at all sound.

Now, what are these facts?

The first to which I shall call your attention is, that our Saviour is the fountain of this doctrine. If the strong testimony concerning a future penal state has been found chiefly in Paul or in Peter, then men would very likely have said —or felt, if they did not choose to say—that it was a human exaggeration. But the remarkable feature is, that this doctrine does not appear in the Old Testament at all, and that in the New Testament it is, I might almost say, but just alluded to anywhere else except in the teachings of the Saviour. And the figures representing the fact, the solemn annunciation of the fact itself, and the frequent use of this great shadow of dread in the future, belong to that meek, and loving, and gentle, and atoning Lamb of God.

I do not know what significance this will have to you; but I confess that when I find myself revolting from this doctrine on account of the intense materialism of the Church derived from medieval representations, and I go to the New Testament and see the calm, frequent, unequivocal utterances of Christ, and think what he was, how he left, and what he taught, the simple circumstance that it is a doctrine of which Christ is the author and teacher is to me the most convincing of all things. Coming, as it does, from Christ,

it impresses me more strongly than it would if it came from Paul, or any other of the disciples. Though I consider that they were inspired, yet I can not but feel that, emanating from him it is different from what it would have been if it had emanated from either of them.

If, then, a man says to me, "Do you believe in future punishment?" I have to say, "I do." And if he says, "How do you reconcile it with the goodness and justice of God?" I say, "The Lord Jesus Christ himself was the very one that introduced and taught it."

As to those word arguments by which this teaching of the Saviour is explained away, I have only to say that any latitude of construction which explains this away explains away every other teaching of his. If by any process of dissection and disjointing you can take out that doctrine of Christ, I do not know what you can not take out by the same process.

It is a very awful and painful view. I feel when I look upon society and think of that doctrine, as I should if I looked into a crater. I shudder. I hide my eyes and heart from it. It touches me to the core of my life. I positively dare not think of it in certain moods. It is a dreadful thing.

But then, as this is the teaching of Christ, a spiritual teacher, in respect to men who are to go out of this life as spirits, and to dwell in a spiritual realm, I hold that it is reasonable to infer that the punishment of the future state is not material in any way whatever; that it is a moral and spiritual punishment, following the transgression of law; that it consists in the reaction of the mind, by its own laws, on itself; that it is the being withdrawn from the Divine presence, and those fertilizing and joy-inspiring influences which come from personal communion with God. And this view takes away all that repulsiveness which we can not but feel when the doctrine of a barbaric, bodily, material punishment is taught. As no man supposes that the streets of heaven are paved with gold because the Apocalypse represents them as being so paved, so we are not to suppose that the gross representations of hell which we find in the

New Testament are to be taken literally. As no one supposes that the symbols employed to give us some conception of the degree of joy in Heaven are meant to convey to us a conception of its kind, so we are to suppose that the symbolism which is given of hell is employed to represent the degree rather than the kind of unhappiness there.

JOHN LAW.—A BRIEF SKETCH OF HIM.—THE FAMOUS MISSISSIPPI SCHEME.

ROMANS' BANKERS' MAGAZINE contains a very interesting history of the celebrated John Law, the projector of the well-known Mississippi scheme, and the author of paper money in France. Law's life is almost like a romance. He was born in Edinburgh, in 1761. His father was both goldsmith and banker. Young Law entered into his father's business at the age of seventeen. He studied diligently the principles of banking. When his father died, he inherited his property, quit the business, and lived extravagantly in London. Several years passed. Meantime he became a famous gambler. His success was astonishing. But reverses came, and close on the heels of them a duel, in which he killed his adversary. He narrowly escaped the gallows. He then wandered all over Europe, and was distinguished in all the chief cities as a bold adventurer and successful gamester. But still he devoted many of his hours to the study of financial affairs. He conceived a theory in reference to paper money, which he proposed to several potentates, for he kept high company. Amongst others, he made the acquaintance, in the gambling saloons of Paris, of the Duke of Orleans, who became a convert to his theory. The King, Louis XIV., died; the Duke became Regent. He found France bankrupt, and knew not what to do. Law opportunely made his appearance, and proposed to the Regent the scheme about which they had so often conversed. It was adopted. The results were startling. In the course

of a year Law's notes rose to fifteen per cent. premium. He attracted the attention of the whole kingdom, and his credit rose from day to day. Branches of his bank were almost simultaneously established at Lyons, Rochelle, Tours, Amiens, and Orleans.

Cheered by success, Law commenced the famous project which has handed his name down to posterity. He established, with the consent of the Regent, a company "that should have the exclusive privilege of trading to the great river Mississippi, and the province of Louisiana on its western bank." The country was supposed to abound in precious metals. The capital was divided into 200,000 shares of 500 livres each.

Law's bank had worked such financial miracles, that everybody expected the same dazzling success from the "Mississippi, scheme." The frenzy of speculation seized upon the nobles and upon the masses. Everybody, high and low, wanted the stock. Crowds of thousands upon thousands crowded Law's house to buy the stock. Dukes and duchesses would wait for hours for an audience. Men who were poor in the morning found themselves rich at night.

But at length both of his schemes failed. France was thrown into a worse condition than ever. The people who had worshiped Law now became incensed against him. Those who had humbly craved audience of him now demanded his execution; for ruin, and through his means, had fallen upon thousands. He quit Paris poor, when he might have amassed millions. He resumed his old occupation of gaming, and finally died in straitened circumstances. It seems that he was a sincere believer in his schemes, and attributed their failure to mismanagement.

THE FIRST INHABITANTS OF AMERICA.

IT may be contended, and with much plausibility, that there exists no necessity of recurring to the theories respecting a former land connection between America, Europe and Asia, or the proof of the maritime enterprise of the ancients—for colonies may have reached our shore by the accidental drift of canoes and other vessels. This opinion is abundantly supported by well authenticated instances, most of which have been recorded, hence this subject has attracted attention. Diodorus relates that a Greek merchant, trading in Arabia, was seized by the Ethiopians, and having been placed in a boat and turned out to sea, was carried by the winds to Taprobane or Ceylon. In the time of Eudorus of Cyzicus, B. C. 146, an Indian was found in a boat on the Red Sea, who upon learning the Greek language, stated that he had sailed from India, and had been driven that distance by the wind. Pliny narrates that in the days of Quintius Metellus, some strange and savage people were driven upon the German coast, and sent by the Suevi to that general. The discovery of America by the Northmen was accidental; and Iceland was discovered A. D. 892, by some marines who were bound for the Faroe Islands, but were thrown out of the way by tempests. In 1684, several Esquimaux, driven out to sea in their canoes, were drifted, after a long continuance of boisterous weather, upon the Orkneys. It is related that a small vessel, bound from one of the Canary Islands to Teneriffe, was forced out of her way by contrary winds, to within a short distance of Caraccas, where meeting an English ship, she was directed to one of the South American ports.

In 1731 another bark, sailing from Teneriffe to one of the neighboring isles, drifted from her course, and was finally brought to Trinidad. Cabral, the commander of the Portuguese fleet, set out in the year 1500 to the East Indies, while prosecuting the voyage, departed so far from the African coast as to encounter the Western Continent; and thus the

discovery of Brazil was entirely accidental. In 1745, some vessels were forced out to sea, from Kamtschatka, to one of the Aleutian Islands—a distance of several hundred miles. In 1789, Capt. Bright, his crew having mutinied and seized his ship while on the Pacific Ocean, was placed with eighteen men in a boat, provided only with a small quantity of provisions, and traveled 4,000 miles in forty-six days, succeeded finally in landing at Tima, in the East Indies. In 1797, twelve negroes, escaping from an African slave-ship, took to a boat, and after five weeks, three of the number who had survived, were drifted ashore at Barbadoes. In 1799, three men were driven out to sea by stress of weather from St. Helena, in a small boat, and two of them reached the coast of South America in a month—one having perished on the voyage. In 1820, 150 inhabitants of Anna or Chain Island, situated 200 miles east of the Otaheite, having embarked in three canoes, encountered the monsoon. Two of the vessels were lost, but the occupants of the third, after being driven from island to island, and obtaining a scanty subsistence, were found 600 miles from their point of departure. Three natives of Otaheite, have been met on the island of Wateo, whither they had drifted in a canoe over 500 miles.

In 1782, Capt. Inglefield of the *Centaur*, and eleven men, sailed upon the Atlantic Ocean 300 leagues, and in an open pinnace, without a compass, chart or sail, and were ultimately landed on Fayal. A native of Ulsa has been found on one of the coral isles of Radack, where he had arrived with two companions, after a long voyage of eight months, during which they had been driven by winds to the amazing distance of 1,500 miles. In 1786 several natives of the Caroline Islands were carried by the winds and current to the Philippine Islands, by which means that group first became known to Europeans. The Japanese are often accidentally thrown upon the Philippine Islands. In the year 1542, three Portuguese sailed from Siam in a junk, and were driven out of their course to within sight of Japan. In 1822, a Japanese junk was cast away on the American coast at Cape Flattery, and out of seventeen men only three

were saved. In the same year eleven of the same nation were drifted to the Sandwich Islands.

In 1721, thirty men, women and children were driven by bad weather from Earrioless to Gauham, one of the Marian Isles, a space of 200 miles, and in 1696, a like number were carried from Ancorsa to Tamar, one of the Philippines, about eight hundred miles. In 1720, a large canoe, filled with natives, arrived at the Island of Maurua from Rututu, 500 miles in a direct course. Subsequently, another from Otaheite, 600 miles; two reached Taheite from Hao, of the existence of which place the Otaheitans were before ignorant; and the native missionaries traveling among the different Pacific groups are continually meeting their countrymen who have been driven out to sea.

Multitudes of these occurrences must have preceded the progress of modern discovery in the Atlantic and Pacific oceans, and consequently have happened without leaving any record or trace. Accumulated cases of this kind should be taken in connection with the fact that excepting Spitzbergen and Nova Zembla to the north, Falkland and Fergueland's Island to the south, whose inhospitable climes forbid permanent habitation and subsistence, no considerable extent of land has been found uninhabited, and that with the exception of St. Helena, the smallest islands capable of supporting a population, including nearly all the numerous islets of the Pacific, however distant from continents, have been discovered tenanted with human beings. Our race occupies islands and continents detached from the fountain-head of all human life, and pervades nearly every inhabitable spot of the globe. Thus widely has the earth been peopled in the early periods of society—either by maritime nations or by barbarians destitute of those arts of civilization and that perfection in science which enable men to intrust their lives and property without danger to the ocean, and to pursue the path of discovery in confident security.

It is impossible to attribute this extensive distribution—this tide of population flowing from island to island, and from continent to continent—entirely to the maritime abili-

ties of former ages, and equally impossible in many cases to suppose a former land connection, as a means of solving the difficulty. Experience affords the only clue to this problem, and shows that by those adventitious causes which have always been in action since the beginning, man has found his way wherever his Maker has prepared him an abode; and that, in the language of a distinguished author: "Were the whole of mankind destroyed with the exception of one family, inhabiting an islet in the Pacific, their descendants, though never more enlightened than the South Sea Islanders, or Esquimaux, would in the course of ages be diffused over the whole world."

EULOGY DELIVERED UPON THE LATE JOHN BURBANK, BEFORE THE SILVER STAR LYCEUM, VIRGINIA, NEV., MARCH 27, 1865, BY OSCAR T. SHUCK.

R. President and Gentlemen:—In support of the resolutions which I have just read, I ask your audience for a brief while. I am unwilling that this assembly—moved, as I know it is, by common emotions of sorrow—should disperse itself, without adding to these resolutions my very feeble, very humble, yet very earnest tribute of respect to the character and memory of our deceased friend.

We have just received a most unwelcome visitation from that powerful, invisible, invincible destroyer, who is no respecter of persons, and before whose prowess all must bow. That foe to human kind—that crusher of human hopes—always eager to attack either revered age, vigorous manhood, or budding infancy—yet himself more invulnerable than superstition ever rendered Achilles—has intruded his dark presence into our midst; and a dutiful son, a promising youth, and a boon companion, has been suddenly torn from the parent's providence, from the scenes of busy life, and from the embrace of friends!

John Burbank, was born in Cherryfield, in the State of Maine, on the 6th day of April, 1844. In the year 1855, he

arrived with his father's family in San Francisco. About one year ago he came to this city, where he has since resided. On the afternoon of Sunday, the 25th of March instant, at his father's rooms, on B Street, in this city he expired suddenly, peacefully, and apparently without pain, in the twenty-first year of his age.

My acquaintance with deceased extends back only a little more than two years, and therefore I can not speak with intelligence of his early boyhood; but, from the first night of our introduction in San Francisco, at the rooms of the Pacific Lyceum, to which we, with others present, belonged, I have been quite intimate with him, and have been enabled to form a very fair, if not an entirely perfect conception of his character and disposition. And in sooth, how pure was that character! how gentle that disposition!

Mr. President, I am not here to utter any idle panegyrics or blind eulogies. God forefend that I should here indulge in vain declamation! God forefend that I should utter one syllable of praise over his body, now that he is dead, which would not have sprung spontaneously from my heart while he was yet with us in the flesh! How often has Gray been answered in the negative?

> "Can storied urn or animated bust,
> Back to its mansion call the fleeting breath?
> Can honor's voice provoke the silent dust?
> Or flattery soothe the dull, cold ear of death?"

Sir, the bounds of truth need not be surpassed on this occasion.

John Burbank was a young man of fair education—having some knowledge of the classics. He was possessed of a strong, well-balanced mind. He was endowed with an intellect whose flame burned, not brilliantly, yet steadily. His judgment, considering his years, was quite mature. His attachments were warm; he was of a quiet, sober temperament, of good habits, and *multum in parvo*, through all the vicissitudes and perplexities of life, he "kept the even tenor of his way." I know of no enemy he possessed—indeed, it would be difficult to point to his equal in that God-

given quality of acquiring to one's self the undivided esteem of associates. The expression *de mortuis nil nisi bonum* would never be repeated were all like him.

He had selected as his profession through life that noble one to which so many of us present are wedded, and bade fair to become in early manhood, a ready practitioner and a safe and sober counselor. But every plan has been disarranged; every earthly hope has been dashed; every earthly wish ungratified! His soul has departed; his body is fast resolving into dust, and only the memory of his modest life and his radiant virtues is left us.

Let us now repress, if possible, our own emotions, and place before our eyes the sad picture of a stricken family! Let us look over and beyond the white sierras, eternal sentinels of two young States! and list to the "choking sighs" of mother, sister, brother, weeping in an agony of grief for him who was just centering in his young person all their hopes and expectations, but who has died far away from them, and from home, upon the very threshold of manhood, and in a dry, a rugged, and a barren land. It was doubtles sobserved that one of the resolutions read seeks to express to that family our liveliest sympathies for them in their bereavement, and is entitled to our cordial and unanimous indorsement. Let us show to that afflicted family that our friend lived esteemed and died regretted by all who knew him.

Mr. President, I can not resume my seat without referring to an expression which fell from the deceased a few days before his death. I met him within a few paces of the building in which the Judge, his father, holds his chambers, and where Death so lately held his. He was then unstricken by disease; he was walking in the vigor of youth, and the flush of health triumphed upon his brow. Our conversation immediately turned upon the times and the prospects of our new State. Like many others, he was dissatisfied with both. He told me that he was going to *leave this country*—he added that he was going to Mexico. He foresaw the magnitude, the importance, the dignity, the prosperity, the power, the wealth, the grandeur to which that poor, desolated Republic must some day attain. He

saw that all the elements of empire lay unconcealed and unimproved within her embrace. He longed to go there: there he wished to commence his career; there he wished to wage the great battle of life, which, he thought, would be fought with comparative ease upon her broad arena, under those bright cerulean skies which bend over her like a banner of love. He felt toward that land the same sentiment which led the poet Browning to exclaim of Italy—"Oh. *woman* country!" He also knew that

> "Stern Winter smiles on that auspicious clime,
> Her fields are florid with perennial prime;
> From the bleak pole no winds inclement blow,
> Mold the round hail, or flake the fleecy snow,
> But from the breezy deep the blest inhale
> The fragant murmurs of the Western gale."

Such was the country he intended to dwell in, and, after a prosperous and honorable career, he would willingly breathe out his life upon her soft, luxurious soil, beneath the undulating shadows of the palm and the date.

Only one portion of his wise and well-formed design was fulfilled. He did, really and solemnly, *leave this country;* but, like Moses leading the hosts of Israel to the Land of Promise, he was destined never to reach that Canaan on which he had bent his hopes and set his heart. But the words of Shelley are true as they are immortal: "Death, though a gate of dreariness and gloom, yet leads to azure isles and beaming skies, and happy regions of eternal hope!"

And, therefore, sir, we may hope that our lost friend has reached a better and a happier land than that which he fixed upon for his earthly home; a clime where the streams run clearer, and the waters are sweeter—where the skies beam with unfailing and eternal brightness! To that *only* happy land; to that *only oasis* for the weary soul—we trust *thou* hast fled, departed spirit! So, good-bye, comrade! Farewell, honest, upright, just and noble boy! Farewell, boon companion! Farewell, tried and trusted friend! Peaceful and buoyant be thy pure spirit through-

out eternity! May God's love keep thee by his side forever!

BIOGRAPHY OF FATHER KINO, THE FOUNDER OF ARIZONA.

IT is not a little singular that though the Americans have had possession of the Alta Pimeria of the Spaniards since December, 1853, and which owes its foundation and mineral fame to the Jesuit explorer and traveler, Francisco Kino, not one correspondent of a California newspaper, writing from these parts, ever noticed, more than casually, his name. Padre Kino labored in Sonora as a Catholic priest, from 1687 to 1711. Not only is he known in religious chronicles as a light in the Spanish Catholic Church, but he is equally celebrated in the cosmography, history, and astronomy of the times. To him was also owing the foundation and settlement of Lower California, and he made great discoveries in the southern frontiers of Alta California, and once (in 1703) set out from the Sonora Missions to travel up by land to Monterey and Cape Mendocino, before a white man ever trod the interior; but, unfortunately, he was turned back by fatigue, old age, and sickness, at the river Gila.

Kino was born about the year 1641, at the ancient city of Trent, in German Italy. He studied at the University of Ingoldstadt, in the old electorate of Bavaria, under the Jesuit Henrico Shearer, well known in the literature of the times prior to 1700. After Kino's primary studies were finished, he entered the Catholic priesthood, and became a devout and ardent member of the Society of Jesus. This wonderfully zealous and active fraternity were then penetrating into every corner of the Christian and heathen world. Kino was a man made to their hands, for not only was he devout, but he was learned, diligent, indefatigable; with faculties keenly perceptive, and born to make his mark. In reality, he was a man of wonderful genius.

In the beginning of the year 1711, Father Kino, or, as he

was called, the Apostle of Sonora, at the age of seventy, came to the end of his life in one of the old Missions he founded. An intelligent native of Sonora, who had traveled much in California and his own country, informed us, a short time ago, that his memory is still greatly revered among the Christian Indians and the *decent* people of Sonora, and that he was buried at the Mission church of San Antonio, in the pueblo of Aquitoa, which is situated in

MISSION CHURCH OF SAN XAVIER DEL BAC.

a valley about six miles from Altar. A monument is erected in the church to his memory. It is a little singular that no correspondent of any California newspaper has ever noticed this interesting fact, even as late as June, 1860—though several have noted their stopping-days at these very places. In Altar and Aquitoa are said to be still preserved many manuscripts of Kino, on the geography, languages, Indians, Missions, and history of Sonora. The surveys of Bartlett and Emory, and those of the Pacific Railroad, with the

accounts of late newspaper correspondents from 1853 to 1860, entirely confirm the faithful and far-seeing histories of the old Jesuit friar.

Kino arrived in Mexico in 1680, when he was about thirty-nine years old, and immediately entered into an animated discussion with Siguenza, the celebrated Indianologist and astronomer of the City of Mexico, whose works have been so much commented upon by Humboldt and later writers. This scientific contest was an analysis of the data of the great comet of 1680, which was then scaring the simple people of Mexico to death. From this, Kino passed in his zeal to the Missions of Upper Sonora and Alta Pimeria, now known as Arizona, or the Gadsden Purchase, where he arrived in 1687. Between that time and the time of his death, in 1711, he not only built up and established the first Missions of Lower California, which he visited by sea more than once, but he commenced the foundation of nearly every important town, village, and Mission north and east of Hermosillo, and as far up as the river Gila. He established great numbers of Missions, and is stated to have baptized, with his own hands, not less than forty thousand Indians. His labors as an explorer and cosmographer were wonderful. It is he who first laid down on the maps the latitudes of the mouth of the Gila and the head of the Gulf of Cortez. His observations differ very little from those of Major Emory, in 1856-57.

Kino made five expeditions to the countries of the Gila and the Colorado previous to 1707, besides extensive and fatiguing journeys into every part of Upper Sonora. His reports to the viceroy of Mexico, the king's ministers in Spain, and the generals and functionaries of the Jesuits, still exist in the archives of Mexico, Spain, Rome, and even France; and are said, by Spanish writers prior to 1800, to have been exceedingly voluminous. That to Madrid made an immense volume, and laid the basis of the Spanish colonization policy of the Pacific countries as high up as Oregon. For in those days the Jesuits were rapidly ascending to the zenith; their sun was powerful. The expulsion of their order from Spanish America had its great secret

moving pivot in their zealous efforts to prevent the Spanish civilians and the military from making slaves of the Indian neophytes, to work in the *Planchas de Plata* and rich mines of Arizona and Sonora, which, about 1720–30, set all Mexico in a fury of avarice and money-getting. The *Gambusinos* gained the day, and from this then distant quarter of the world the ball was rounded, well hardened, and set in motion until the Jesuits were run out of Spanish America, in 1767, by judge, miner, soldier, and gambler—materially assisted by their jealous brethren, the Franciscans, Dominicans, and Augustins, and the varied classes of the Mexican *Fraylayria*, now having their turn in 1860.—*S. F. Bulletin*, August 21, 1860.

A BEAUTIFUL COUNTRY.

SOUTHERN CALIFORNIA constitutes one vast garden, cut up into a world of Edens. The ecstatic heart spontaneously exults at its glowing magnificence, and glories at the prospects of its future existence. It is no wonder that the inhabitants of this gorgeous country repose in the lap of contentment, and that many believe that "the spirit of God pervades the very atmosphere," and "Zion on the tops of the mountains is nearer heaven than other parts of the earth;" this latter quotation being a little Mormon in its general tenor, but strictly applicable to the great majority of the early American settlers of Los Angeles and San Bernardino valleys. Look at the mountain ranges of this charming country, tumbling with delightful irregularity one upon another, and looking frowningly upon the detached spurs that rise majestically above the highest points of the mother range. Look at their horny heads, enveloped in a dreamy haze, and at intervals sharply silhouetted by a gorgeous sweep of sunshine, and exhibiting, in fantastic shapes their tilted-up strata, ragged edges, rugged sides and somber brows, the whole standing out with that phase of intoxicating sublimity of which the sense of grandeur and immensity is the principal element. Look also at the sparkling rivers

dashing down their brown flanks, and meandering through the foot-hills till lost in the valley of emerald, azure and gold below. Eastern people know nothing of this paradise of the Occident; and our own people lack information regarding this portion of the Pacific territory of the United States. The eastern traveler, who makes the overland trip even, generally terminates his tour at San Francisco. He may visit the Geysers, or the Yosemite, for pleasure; but he finds no time to extend his journey into Southern California; and the country of the vine, and the orange, and the fig, and the olive, and the whole catalogue of tropical productions nearly, find few chapters in the multiplicity of books that have been written upon the "Land of Gold." This is also the case with the emigrant and professional seeker after occidental homes. Infatuated with the glitter of the tales of gold, the fortune-hunters depart for the mines, little dreaming of their precariousness and the bitter toil in store. Nine out of every ten miners and prospectors eke out an unhappy and unwholesome life, with no intellectual recreative pastime, and finally terminate their existence in a miserable or violent death.—*Cor. S. F. Bulletin*, Sept., 1867.

GEOLOGY.—PROFESSOR WHITNEY'S LECTURE.

PROF. WHITNEY'S, lecture, Thursday evening, before the Legislature, in the Assembly Chamber, was quite long and interesting. He spoke of the vast scope of geology—how it deals with every variety of organic and inorganic matter, and how mathematical and other sciences are pressed into its service. The ancients noticed the occurrence of marine shells on high lands, and the elevations and depressions of the earth. They wondered thereat, and sought the cause. This was the first study of geology. Ovid seems to have had an elementary idea of the organic changes; and at a later period, Aristotle appears to have had an intimate ac-

quaintance with all the changing cycles of the earth. Italy was the cradle of geological study. The ancients stuck upon the question whether fossils were originated by plastic force and mere sports of nature, or whether they were really fossils or organic remains. Bitter discussions arose between the two parties holding to these contrary views—discussions bitter as any theological or political partisan controversies of our own day. But little further progress was made until a quite recent date, when it was determined that facts were needed upon which to found a firm geological structure. This was but fifty years ago. Then the London Geological Society came to this conclusion; and the advance from then till now has been really wonderful. The growth of other sciences has also materially aided this—astronomy, for instance. It has enabled us to ascertain the form, weight, &c., of this planet.

The earth was in the beginning in a state of fluidity. It must have been softened by heat. As you go down toward its center the temperature rises, and when you reach a sufficient depth you meet hot water. As a general average rule, the temperature increases one degree Fahrenheit to every sixty feet as you descend into the earth. The greatest depth yet attained by miners in the earth is from 2,000 to 2,500 feet below the surface. The deepest artesian well in the world is 2,300 feet deep, when hot water was met. This plainly shows that the source of heat lies in the center of the earth. Volcanoes and earthquakes also prove this, the former being the vents for gases generated by interior heat.

For the past five or six years volcanoes and earthquakes have attracted much attention among geologists. California is not in the region of heavy shocks, although in building houses it would be well to make them substantial enough not to fall down before they are finished. Earthquakes always have a wave-like motion. Throw a pebble into a pond, and a wavy, gradually increasing circle is formed. The motion imparted to the water, although it appears to be lateral, is really perpendicular. The great Lisbon earthquake was precisely like one of these circle-waves. Its in-

fluence was felt not only in Northern Europe, but in the Antilles and North America—extending over one-thirteenth of the earth's surface, and traveling at the rate of 1,650 feet per second. Prior to the year 1300, the number of recorded earthquakes experienced in the world was 387. From that time until 1800, there were 2,814; from then until 1850, there were 3,840; and from 1850 until 1858, there were no less than 4,620! This, however, must not be supposed to be the real—only the recorded increase. From the record of Dr. Trask, California averages from three to fourteen earthquakes per annum. No human life, however, has ever thus been destroyed, except in one instance in California, and that was during the earthquake that in 1812 threw down the church of the Mission of San Luis Obispo, and killed thirty or forty persons. The Sierras at a recent geological period were formed by upheaval; they are part of that great chain of volcanic mountains stretching from Cape Horn to Behring's Straits, which furnishes the most extraordinary displays of the workings of the vast central fires of the earth. Chile, Bolivia, Peru, Central America, and Mexico, are the present fields of active volcanic agency. In Chile, there are no less than thirty vents vomiting forth flame and cinders and lava. Here the power is dormant, the tremendous convulsions which have torn up California took place at the close of the tertiary epoch, before the race of man appeared upon the scene. Then it was that the auriferous detritus in the river beds was covered over with pumice, the bones of the elephant, mastodon, and—the original Digger.

When the great mass of heated matter was cooling, by contraction the smooth surface became wrinkled, and thus the mountains and valleys were formed. It is by the reaction of the molten interior of the earth against the colder crust that earthquakes are caused. It has been a matter of much inquiry whether the same effects were produced upon this interior fluid mass as upon the ocean by the moon—whether there were tidal changes. And it has been demonstrated by recorded experience that there are very many more earthquakes occurring at the moon's full, than at her

quarter. They are also more frequent when she is closest to the earth. The moon's surface is a remarkable volcanic one. Looking through a powerful telescope you will see what are called the ring mountains, some of which are one hundred and fifty miles around. These are immense shells—craters of great depth. In some of these craters you will see small mountains rising up in the center. The moon's mountains are, some of them, much loftier than any upon the earth's surface, yet the earth has four times a larger diameter than her satellite. The moon has evidently cooled down from a state of igneous fluidity. The greatest analogy exists between her extinct volcanic craters and Mauna Loa (Sandwich Islands), now so active. But nowhere upon earth, save perhaps in Iceland, are scenes of such inanimate, hopeless desolation as upon the moon's surface. It is completely "played out." Never again will volcanic fires burn there. They are exhausted. There does not appear to be a drop of water in the moon. And without these two agencies it must forever be the same as now. Nor can we imagine any class of life that can be living there.

Fire and water are the great laborers who work the eternal changes. The internal fires throw up mountains. The mountain streams slowly, patiently, but surely carry them down again through the great rivers to the ocean, upon whose bottom the sedimentary deposits rest until upheaved again, to be again torn down. Thus the cycles of changes march on, and the various stratifications are formed—forever at work; destruction here, re-formation there, and *vice versa*. By earthquakes the astonishing mile-deep gorges of the Colorado were formed, and other peculiar features of the earth.

There are three orders of sandstones, which are those of the beginning, the middle, and the end. It is in these that the fossilized remains of organic life are found, and their development of the regular order of beings is astonishing. In the sandstone of Pennsylvania are to be found the remains of gigantic frogs, and the imprint of feet of enormous birds. The frogs of that day fulfilled the fable of swelling to the size of an ox. In another order of sandstone is found

the stage of conglomerate life, where bird, fish, and reptile were in one. Geology has shown that life had a beginning —that there was a moment in the processes of creation when the fiat went forth, "Let there be life." But for geology there would have been no evidence but that life had always been the same as now. It has been demonstrated that life has been progressive from the azoic epoch until now—from the lowest zoöphyte to the highest order of man. The sandstones have revealed this. First there were the mollusca, then the fish, then half fish and reptile, then the huge fish, then the mammalia. From the opossum it runs up to the highest order of mammals. Here we have an animal part horse, part camel, part giraffe, part hippopotamus. Thus the order of progression runs up to man, the highest of all. As in life, a man is born, reaches his meridian, and dies; so with species and genera; otherwise we can not account for their extinction.

For the past two years the attention of the geological world has been excited by discoveries in Egypt by French and German explorers. Works of art had been exhumed, that had been buried over 5,000 years, showing that at that time a high stage of civilization had been attained by man. Under the auspices of the London Geological Society, experimental explorations have been carried on in the Nile Valley that have led to startling discoveries. Upon the banks of the Nile it was found that deposits were made some 4½ inches deep, in one thousand years. Borings were commenced, in the course of which great quantities of works of art were found at a great depth; and it was clearly shown by the layers, that they had been there over 10,000 years. These showed, too, that at that time civilization had wonderfully advanced; showing, too, that the 10,000 years was as nothing compared with the back date of the early stages of man's existence.

In Europe, which has been more explored than any country by geologists, the ages of man upon earth are divided into three—the stone, the bronze, and the iron ages. These indicate the growth of civilization. It has been shown that man was contemporaneous with the mastodon. In 1858,

Falconer found in a cave in Devonshire, England, instruments of labor, with bones of extinct animals. Ten years before that, Buché had found, near Amiens, in France, human bones in the same diluvium stratum in which were found the bones of the mastodon. He wrote a book upon the subject, which, to the shame of science be it said, attracted no attention until after Falconer's discovery. In 1859, however, it attracted the attention it deserved. Geologists went to the spot in France indicated, and dug up, from a layer that had never been disturbed, the bones of man, mammoth, rhinoceros, and some animals that had been extinct since the commencement of the historical epoch. The English Channel was not then in existence, as in those times they could walk across from England into France. Yet 1,900 years ago the English Channel was much as it now is. It was then crossed by Julius Cæsar in vessels. What an immensity of time then must have transpired since the waters first commenced to wash between the two countries! How long a time must have elapsed since the bones recently found in France and Devonshire (indicating this great age), were clothed with flesh and muscles! Ten thousand years would be a small fraction of it!—*S. F. Bulletin.*

THE ANNIVERSARY OF THE BEAR FLAG.

From the *Alta Californian*, June 15, 1866.

TWENTY years ago, the Bear Flag was hoisted in Sonoma as a symbol of revolt against Mexico, and on the same day a proclamation was issued by William B. Ide, commander of the party, in which he gave the reasons of the movement, and declared that the Americans in the territory had been "threatened by proclamation from the chief officer of the aforesaid military despotism (the Government of California), with extermination if they would not depart out of the country, leaving all their property, arms, and beasts of burden." This was a great mistake on the part of Ide and his friends. The authorities of California had issued no such proc-

lamation, nor was such a matter thought of. At this very time the leading native Californians, as a class, under the advice and influence of Thomas O. Larkin, with the co-operation of Leese, Robinson, Stearns, and Hill, were inclined to favor annexation to the United States. Numerous consultations had been held with high officers on the subject, and a convention had been called to take some decisive action. Every thing appeared to indicate the success of Larkin's negotiations, when Fremont arrived, insulted and defied the authorities, alarmed and irritated the Americans in the Sacramento Valley, and thus led to the outbreak of the Bear Flag party, which very much increased the difficulty of the American conquest. Fremont has been called the conqueror of California, but we are satisfied that a careful examination of the facts will show that his imprudence greatly increased the bitterness of the native Californians against the Americans, as his disobedience to his superiors afterward led to his dismissal from the army. We publish a couple of documents which relate to Fremont's conduct, and have never been in print hitherto. The first is a letter from Fremont to Dolores Pacheco, Alcalde of San José, in which he refuses to appear before the authorities of the country to answer a claim to the ownership of some horses in his possession, and he further says the claimant ought to consider himself lucky for being allowed to leave the American camp without a horsewhipping. Such language from an alien is beyond all the bounds of propriety, and we can not be astonished when we see that, very soon afterward, Don Manuel Castro, the Prefect of San José, ordered him to leave the territory. Instead of complying, Fremont fortified himself, and declared that he would fight to the last, and would give no quarter. He took no advice from Larkin, the accredited and confidential agent of the Government, and his tone toward the natives was so harsh that there was no opportunity for compromise. The indirect result of his conduct was the Bear Flag insurrection, which held power in Sonoma from the 15th of June to the 11th of July. The movement was so bold, its military operations were so well managed, the individual conduct and character

of its members were so exemplary, their services in the war were so valuable, and their flag was superseded so soon by the Stars and Stripes, that the serious error of judgment committed in the movement, and its injurious influences on the political negotiations then in progress, have been overlooked by nearly all who have written about the history of the country.

THE BEGINNING OF THE WAR IN CALIFORNIA IN 1846.

BELOW we publish a couple of documents, never before in print, relating to the beginning of the troubles which led to the Bear Flag insurrection in 1846 :—

FREMONT TO DOLORES P-CHECO.

CAMP NEAR ROAD TO SANTA CRUZ,
February 21, 1846.

SIR: I received your communication of the 20th, informing me that a complaint had been lodged against me in your office for refusing to deliver up certain animals of my band, which are claimed as having been stolen from this vicinity about *two months* since; and that the plaintiff further complains of having been insulted in my camp.

It can be proven on oath by thirty men here present, that the animal pointed out by the plaintiff has been brought in my band from the United States of North America. The insult of which he complains, and which was authorized by myself, consisted in his being ordered immediately to leave the camp. After having been detected in endeavoring to obtain animals under false pretenses, he should have been well satisfied to escape without a severe horsewhipping.

There are four animals in my band which were bartered from the Tulare Indians by a division of my party which descended the San Joaquin Valley. I was not there present, and if any more legal owners present themselves, these shall be immediately delivered upon proving property. It may save some trouble to inform you that, with this exception, all the animals in my band have been purchased and paid for. Any further communications on this subject will not, therefore, receive attention. You will readily under-

stand that my duties will not permit me to appear before the magistrates of your towns on the complaint of every straggling vagabond who may chance to visit my camp. You inform me that unless satisfaction be immediately made by the delivery of the animals in question, the complaint will be forwarded to the Governor. I would beg you at the same time to inclose to his Excellency a copy of this note.

I am, very respectfully,
Your obedient servant,
J. C. FREMONT, U. S. Army.

To SR. DON DOLORES PACHECO (Alcalde of San José).

MANUEL CASTRO TO FREMONT—TRANSLATION.

PREFECTURE OF THE SECOND DISTRICT,
MONTEREY, *March* 5, 1846.

I have learned with much dissatisfaction that, in contempt of the laws and authorities of the Mexican Republic, you have entered the towns of the district under my charge, with an armed force, which the Government of your nation must have placed under your command for the sole purpose of examining its own territory. That this Prefecture orders you, immediately on the receipt of this communication, to return with your party beyond the limits of this department, with the understanding that if you do not comply, this Prefecture will take the measures necessary to compel you to respect this determination. God and Liberty.

MANL. CASTRO.

SENOR CAPTAIN DON J. C. FREMONT.

EARTHQUAKES IN CALIFORNIA PRIOR TO 1864.

THE records of the different missions in California, from the time of the founding of the first one in 1769 down to the year 1800, make no mention of earthquakes, from which we may reasonably infer that during that time—a period of thirty-one years—no serious phenomena of that kind occurred. In the latter year the first evidence of an earthquake shock is recorded as having occurred in San Juan Bautista on the 11th of October, and on the 18th of the same month another shock is recorded as occurring at supper-time, which was followed by still another at eleven o'clock the same night. The next record is found in the annals of the Presidio at San Francisco, where twenty-one shocks of earthquake are mentioned as occurring between the 21st of June and the 17th of July, 1808. From this time until 1812, nothing more is said of earthquakes in the records, nor has it been possible to obtain information from old residents showing that any shocks worthy of mention were felt. It was in the month of September of that year (1812) that the great California earthquake occurred, and the only one that is known to have resulted in loss of life. This earthquake destroyed the mission of San Juan Capistrano, in Los Angeles County, and the mission of Purissima (Viejo), in Santa Barbara County, the two missions being one hundred and seventy miles apart, and caused loss of life. The history of the event, as related by persons who witnessed it, is as follows:—

The day was clear and uncommonly warm; it being Sunday, the people had assembled at San Juan Capistrano for evening service. About half an hour after the opening of service, an unusual loud, but distant rushing sound was heard in the atmosphere to the east and also over the water, which resembled the sound of strong wind; but as it approached, no perceptible breeze accompanied it. The

sea was smooth and the air was calm. So distinct and loud was this atmospheric sound that several left the building attracted by its noise.

Immediately following the sound, the first and heaviest shock of the earthquake occurred, which was sufficiently severe to prostrate the mission church of San Capistrano almost in a body, burying in its ruins the most of those who remained behind, after the first indication of its approach was heard. The shock was very sudden and almost without warning, save from the rushing sound above noted, and to the severity of the first shock at that moment is to be attributed the loss of life that followed.

The number reported to have been killed outright is variously estimated from thirty to forty-five (the largest number of persons agree on the smallest number of deaths given), but in the absence of records such statements should be received with many grains of allowance, where memory alone is the only means left, and the term of forty-three years has elapsed before the period at which this account was placed on paper. A considerable number are reported to have been badly injured. There is a universal agreement on this point with those from whom these facts were derived, viz.: that the first shock threw down the entire building, and that a large number of persons were in it at that moment, and under the circumstances it would be most singular if no deaths were caused by such an event.

The motion of the earth is described as having lifted vertically, attended by a rotary movement. No undulatory motion is described by any one. Dizziness and nausea seized almost every person in the vicinity. A heavy, loud, deep rumbling accompanied the successive shocks that followed, which were five in number, all having the motion above described, though comparatively light in their effects to the first. The sounds attending the phenomena came apparently from the south and east.

In the valley of San Inez, to the south and west of Santa Barbara, the church now known as the "Mission Viejo" (La Purissima), was also completely destroyed. At this

locality there were also a number of lives lost, but what number is as yet very uncertain.

The shock which destroyed this building occurred about one hour after the former, and the greater portion of the inhabitants had left the building but a few minutes before it fell, service having closed. The first shock felt here prostrated the building, as in the preceding case.

A Spanish ship, which lay at anchor off San Buenaventura, thirty-eight miles from Santa Barbara, was much injured by the shock, and leaked to that extent that it became necessary to beach her and remove most of her cargo.

It is an interesting fact, and at the same time somewhat remarkable, that the time which elapsed between the advent of the shocks at Capistrano and San Inez is widely variant from what we should look for, when the distance apart and velocity of motion in earthquakes are taken into consideration.

The effect of this earthquake on the sea in the bay of Santa Barbara is described as follows: "The sea was observed to recede from the shore during the continuance of the shocks, and left the latter dry for a considerable distance, when it returned in five or six heavy rollers, which overflowed the plain on which Santa Barbara is built. The inhabitants saw the recession of the sea, and being aware of the danger on its return, fled to the adjoining hills near the town to escape the probable deluge. The sea on its return flowed inland a little more than half a mile, and reached the lower part of the town, doing but little damage, destroying only three small adobe buildings."

In the month of May preceding this great earthquake the southern part of the State was frequently agitated by shocks of greater or less severity, which continued to occur almost daily through the whole period from that time till the great shock in September. As many as thirty shocks are alleged to have been felt in a single day, and they became so frequent as to alarm the inhabitants of Santa Barbara County,

who abandoned their houses and lived under trees and slept out of doors.

With regard to the destruction of the Mission buildings by the great earthquake above recorded, it furnishes but a poor guide in estimating the force of the shocks, for the buildings of that period were probably very slimly constructed compared with similar structures at the present, although the church at San Juan Capistrano is stated to have been "a well built affair of stone and cement." The destruction of the church appears to have been due mainly to the falling of the cupola or steeple.

From 1812 to 1850 the archives of the State are silent on the subject of earthquakes, and although shocks were doubtless felt as frequently as since that time, yet they were so slight as to be deemed unworthy of public record.

In the year 1850 there were five shocks, in the State, of which three were felt in this city.

In 1851 there was six shocks, three of which were felt in San Francisco, and the first of which, occurring on the 15th of May, was quite severe, breaking window glass and severely shaking buildings. The same day there was was an eruption of Mauna Loa, in the Sandwich Islands.

In 1852 there was a series of heavy shocks in the lower part of the State, commencing on the 26th of November, and lasting several days. There were, also, repeated shocks all through the month of December, in the southern and middle portions of the State.

In 1853 there was fifteen shocks in the State, of which four were felt in this city, viz.: January 2d, March 1st, November 21st and December 11th. On the 25th of October of the same year three heavy shocks were felt at Humboldt Bay.

In 1854 there were twelve shocks in the State, of which two were felt in this city—the first on the 2d of March and the second on the 26th of October. The heaviest shock of this year was felt at Santa Barbara, May 31st, which was accompanied by heavy rumbling and loud noise, but did no damage.

In 1855 there were eleven shocks, only two of which were felt in this city.

In 1856 there were fifteen shocks in the State, of which seven were felt in San Francisco. The heaviest was on February 15th, at five and a half o'clock in the morning, and continued eight seconds. The first and principal shock was followed by another, scarcely perceptible. Considerable damage was done, and the upper part of a poorly constructed building on Battery Street was thrown down. The shock was preceded by a heavy rumbling noise, and the motion was from northwest to southeast.

1857 there were seventeen shocks in the State, six of which were felt in this city. The most important was the shock, or series of shocks, that commenced about half-past eleven o'clock on the night of January 8th, and continued until a little past eight o'clock the following morning—there being six shocks during the interval. No serious damage was done. The next in importance occurred on the 2d of September, and was felt over an extent of two hundred miles. Of the seventeen shocks during the year, ten occurred in the autumn and winter, and seven in the spring and summer.

In 1858 there were eight shocks in the State, of which five were felt in this city. They were all comparatively light, except the one felt here a little past midnight of the 26th of November. The shock was confined to an area of ten or twelve miles from the city, and was productive of no serious damage, although it awoke most of our citizens from their slumbers and caused them to spend a sleepless night.

In 1859 the shocks numbered eight altogether, five of which were felt in this city. None of them were heavy or worthy of particular mention.

1860 only three shocks were felt throughout the State. San Francisco was favored with only one, which occurred on the morning of the 21st of December, and manifested itself in the form of a series of light vibrations or quivers, that continued through a period of half an hour.

In 1861 there was only one earthquake in California, and

this occurred in San Francisco, at a quarter past eleven of the 4th of July. It was called a severe shock, but did no damage.

In 1862 only two shocks are recorded in the State, both of which were felt in this city, and are designated as "smart shocks."

In 1863 there were five shocks, of which four were felt in this city—one each in the months of June, July, August, and December. The last was the heaviest; but none of them were productive of any damage.

It appears from the above record that the number of earthquakes felt in the State from 1850 to the close of 1863 was one hundred and ten. The greatest number occurred in the month of January, and the least in the months of February and April; thirty-four occurred in the winter months, twenty-three in the summer months, twenty-four in the spring months, and twenty-nine in the autumn months. The number of shocks between the autumnal and vernal equinoxes was sixty-four, between the vernal and autumnal equinoxes fifty-two.—*Dr. Trask.*

ORIGIN OF THE NAMES OF THE DAYS OF THE WEEK.

OST persons are familiar with the facts in reference to the names of the days of the week, and yet there may be some who are not able to account for the order in which they occur.

The division of time into weeks was probably first made by the Chaldeans; and the general order, as adopted by this ancient people, has existed to the present time.

According to the Ptolemaic system, there are seven planets which revolve around the earth in the following order of distances, beginning at the most remote: Saturn, Jupiter, Mars, Sun, Venus, Mercury, Moon.

The day being divided into twenty-four hours, and each

hour, by turns, being devoted in theory to one or another, in regular order, of the divinities which ruled the planets, the present order of days was necessary, in order to keep up an uninterrupted succession.

Saturn, or Saturday, was the first day of the week, the first hour of which was also devoted to Saturn, the second hour to Jupiter, the third to Mars, the fourth to Sun, the fifth to Venus, the sixth to Mercury, and the seventh to Moon. The eighth was in regular succession devoted to Saturn, so also the fifteenth and twenty-second; the twenty-third to Jupiter, the twenty-fourth to Mars; and the first hour of the second day to Sun—hence the day is called Sunday. By continuing the same order, Sun answers to the eighth, fifteenth and twenty-second; the twenty-third is Venus, the twenty-fourth Mercury, and the first hour of the third is Moon, hence Moonday or Monday.

Moon answers to the eighth, fifteenth or twenty-second hours; the twenty-third to Saturn; the twenty-fourth to Jupiter; the first hour of the fourth day is Mars—Saxon, Tuisco or Tig, hence Tuesday.

The first hour of the fifth day, by the same succession, will be Mercury—Saxon, Wodeno, hence Wednesday. The order gives the first hour of the sixth day to Jupiter, the Saxon Thor, hence Thursday. Friday, likewise, gives its first hour to Venus—Saxon, Frigge.

The result may be conveniently grouped in the following tabular form:—

Saturn	1	8	15	22	Jupiter	Mars	24
Sun	1	8	15	22	Venus	Mercury	24
Moon	1	8	15	22	Saturn	Jupiter	24
Mars	1	8	15	22	Sun	Venus	24
Mercury	1	8	15	22	Moon	Saturn	24
Jupiter	1	8	15	22	Mars	Sun	24
Venus	1	8	15	22	Mercury	Moon	24

THE MINING JURY DINNER.

AFTER the trial of the late Potosi *vs.* Bajazette and Golden Era mining suit, the Potosi Company, in whose favor the jury brought in a verdict, gave a grand dinner at Barnum's Hotel. C Street, to the jury and counsel. As there has been much talk about this dinner, and as the curiosity of the public is still much excited on the subject, we have taken the pains to procure the bill of fare on the occasion, which we here present to our readers:—

MINING JURY DINNER.—BILL OF FARE.

Primary—SOUPS.

Ox-yd and Dry-bone.

Secondary—ROASTS.

Ophir Horse. Porphyry.
Hornblende. Greenston.
Granite. Serpentine.

Tertiary—BOILED.

Feldspar. Amygdaloid.
Casing, caper sauce. Dumps.
Corned feeders and cabbaged waste rock.

Post-Tertiary—ENTREES.

Vein matter *a la mode.*
Black dyke scrambled.
Black dyke deviled, with injunction sauce.
Stopes, stewed with calcareous tufa.
Traverse section, with cleavage jelly.
Breast Bajazette, family style.
Seventh level hash.
Poached silex and pickled adits.
Stratifications, Mexican style.
Cuts breaded, and Black Dyke in onions.
Eastern wall Curry.
Auriferous conglomerate, intercolated.
Lateral heaves, in casing.

Clay seams, in rebuttal.
Friable nodules, in borax.
Hot Bajazette cakes, with Golden Era sirup.

Carboniferous—VEGETABLES.

Bromids.	Iodids.
Chlorids.	Oxyds.
Sulphurets.	Selenurets.
Arseniurets.	Tellurets.

Alluvial—PASTRY.

Magnetic py-rites.	Cuss't hard py-rites.
Iron py-rites.	Copper py-rites.
Crop-course, cream.	Float rock.

Plumbago pudding, with southern dip.

Drift—DESSERT.

Assessments on the half-shell.
Dividends, over the left.

LIQUORS.

Old Potosi.	Ale & Norcross.
Hide-sack.	Santa Rita.
Chamber-tin.	Cheat-'em de Fraud.

The dinner lasted some eight hours, and certainly was the most sumptuous "spread" ever seen in Washoe.—*Virginia, Nev. Enterprise*, 1864.

DO METALS GROW.

IT is supposed by some that the metals were formed or deposited in some past age of the world by the agency either of heat or water, during some great convulsions of nature such as have not been witnessed in the period embraced by written history or tradition. There are reasons for doubting the reliability of this opinion. That various mineral substances are now in process of formation or development is certain. For instance, the

formation of stone is as apparent as its disintegration. On the beach at Lynn, Massachusetts, may be seen a conglomerate of clay and silicious sand impregnated with ferrous oxide, in all stages, from the separated particles to the layers of hardened rock. These rocks are merely the particles of sand cohered and agglutinated by means of the clay and the oxide of iron, the salt water acting as a solvent of the softer particles and the sun's rays compacting and baking all together in one mass. So, also, we know that coal is being formed from peat. The intermediate stage is lignite or "brown coal," which in turn becomes coal.

It is morally certain that gold, silver, copper, and some other metals are now in process of formation or deposition. Abandoned silver mines in Peru have been found rich in arborescent deposits of the metal on the walls of galleries unused for many years. A gold-bearing region, after having been cleaned of the precious metal, gives good results after the lapse of only a few years. So with copper. In the Siberian mines, not only the precious carbonate known as malachite, but the metal itself, in a state of almost absolute purity, is deposited on the walls, roofs, and floors of galleries run under the earth's surface. In some places it appears in masses and in others as tree-like formations, with trunk and branches similar to a delicate moss.

What becomes of all the gold and silver unavoidably wasted in the process of manufacture and the wear of transmission from hand to hand as currency? It is well known that with all the care exercised in the manufacture of these precious metals, and notwithstanding their specific gravity, an appreciable portion of them is utterly wasted; at least so distributed as to be incapable of being collected and used again. Is it annihilated? The teachings of science prove this to be impossible. Nothing is ever wasted. If the particles are thrown into the atmosphere, they must in time seek the earth's surface. Are they attracted by some unknown power to certain localities, and if not, why should not the streets of a busy city become in time deposits of the precious metals?

Perhaps, after all, the old alchemists had an inspiration

of what may yet become *un fait accompli.* When we understand the wonderful processes of nature's laboratory we may possibly imitate her, and grow our own metals as we now do our own vegetables; or we may find the philosopher's stone and actually collect the particles of metals, if we can not transmute a base mineral into one of the precious metals.—*Scientific American.*

ORATION DELIVERED BY REV. J. A. BENTON AT THE FIFTH COMMENCEMENT EXERCISES OF THE COLLEGE OF CALIFORNIA, AT OAKLAND, JUNE, 1868.

MR. BENTON said instead of choosing one of the scented and painted wax-tapers of the legal profession, which were never lighted but upon special occasions, the Faculty had chosen to dip into the candle-box in common use and take out an adamantine, such as they were used to burn every week of the year. The Faculty had chosen him, however, and though he doubted the wisdom of their choice, he would give such light as he could. He said he would save them trouble by telling them his subject before he began. It was: *Empire, or some of the Problems of Mankind.* The world was made for man, and not man for the world. The world, studied in this light, leads to science; in any other light, to sciolism.

The world was so made for man that it was intended to be in subjection to him. All right-minded persons respect that venerable authority which assigns to man dominion over air, earth and sea. Legitimately, and theoretically, man is lord of the world. It is his asserted privilege and right. But, as yet, this is only a predicament of the possible. The prerogative has been very imperfectly maintained. Beginning frequently with the rudest forms, the attempt to maintain the prerogative has been the grand struggle of the ages. He said the desire for dominion naturally concerned itself with his subject. He spoke of the old dream of

empire, and the five more noted empires of ancient history, each illustrating some dominant truth or law. The empires of the Assyrians, Babylonians, and Chaldeans, for instance, represented the idea of absolutism—both in war and peace —the monarch being regarded as the owner of his empire, all its land, all its property, all its men, and all their powers. The empire of the Medes and Persians represents the idea of destination, the unalterable frame of things—legalities and institutions stereotyped, the unalterable sacredness of what has been. The Grecian empire represents the idea of culture, beauty and satisfaction to be obtained through game, exploit, development, art, and generous training, and even war as an art. The Roman empire represents the idea of power asserting itself magnificently, in structures of conquest, laws, institutions, cities, aqueducts, roads, and other structures. The Chinese empire represents conservatism; the notion that perfection has been reached—that the best is possessed—that the highest possible or practicable has been gained, and that men have nothing to concern themselves with but the traditions of the past and the maxims of the sages.

The five modern empires are the Turkish, British, French, Russian, and German, and if we recognize the Chinese as modern, it is the sixth. The Turkish empire represents the idea of fanaticism, growing out of a fatalistic philosophy, and the sword is regarded as the weapon both of the Church and State, and hewing the way for men into a future heaven of sensual delights. The British empire represents possession, wealth, rank, and asserted superiority, with a patronizing regard for the great masses of the people. The French empire represents brilliant achievement, progress, aspiration, steadiness in the pursuit of fame, along with great unsteadiness of method. The Russian empire represents the idea of dominion, vastness, numbers, grandeur undeveloped, and novelty of position, and something of the rawness of a people unused to their place. The German empire represents historic pride, the power of great memories, and the affinities of race, language, and literature. And the modern empire of China represents the force of

ideas, institutions, and characters, in holding their way like a gulf-stream through oceans of time, in conquering their conquerors, and living on through changes of dynasties and invasions of philosophies. If we introduce this New World of ours into the view, we have the empire of Liberty, for the northern part of America; and the Brazilian empire, of hope, and promise, and growth, for the southern part of America.

A grand problem now before mankind is the reconstruction of governmental empires. For economical reasons there should be no small nations. Other things the same, the government of great countries is the best and cheapest. In this view of a re-division of mankind into governments, blood, language, and religion, are commonly the ties that must bind empires together. On the continent of Europe, then, I would consolidate all the peoples whose languages is of Latin origin into one empire: France, Belgium, Spain, Portugal, and Italy, and parts of Austria and Switzerland. Austria should cease to be, and its parts go, according to language and blood, into Italy, Germany, Greece, and Russia. The German empire should have all the Teutonic peoples, taking in portions of Austria, Switzerland, and Holland, and all of Norway, Sweden, and Denmark. Russia is so huge in proportions as to need no enlargements: but should take all such Scandinavian and Sclavic peoples as are not necessary to the symmetry and local requirements of any other nation. Turkey should be thrust out of Europe, and sent to regions east of Asia Minor, where an Arabic empire might live and flourish. A new Grecian empire should then replace Turkey in Europe and Asia Minor, in Crete and in Cyprus. An empire yet to be should hold the bulk of Africa; Australasia should be erected into a power by itself; all South America be given to Brazil, and all North America to the Great Republic. He would have a common money standard—a world coinage; a general system of weights and measures for all sorts of business, even to estimating the tonnage of ships. He would also have a common language. It might not be desirable to abolish the vernacular of any people, but it would come in time

that the universal language proposed should become the language of second nature to multitudes and nations. The French is at present the common language of the polite and social world; the English is the language of commerce and trade. He thought philologists might prepare a common language for trial, though perhaps it was too soon to determine how it should be constructed. It would be a wonderful thing to-day for our advancement were such a language in use the world round—a language lofty enough for worship, dignified enough for courts and diplomacy, concise enough for science, explicit enough for commerce, and smooth enough for art, and tuneful to the musical ear. It is a pressing want of our time, and will be of all the coming times, till itself has come.

The progress of man toward dominion is greatly hindered by the slowness of connection, travel, and transportation. He spoke of the probable exhausting of the coal-beds in a few centuries, and as the demand for light and heat obtained by artificial processes would increase in geometrical ratio, it was necessary to look ahead for the supplies. We know where they exist in unlimited quantities. The oceans and lakes are depositories of oxygen and hydrogen, and little else. What the world wants is a cheap method of decomposing water into its elements.

The question of cheap fuel and high speed is, therefore, a simple question of chemistry. When the ocean steamer can pump her fuel from the sea she rides, all the trouble of loading herself with coals has passed away. It seems to one, when he thinks of it, a small and simple thing to do to cheapen the process for the decomposition of water, so that its elements may be gathered up and used in largest quantities. Yet it is certain that such a discovery as this requires would revolutionize the industry of such a country as England, and modify the travel and traffic of all nations. Nevertheless, this problem is before the world, and our science ought to be modest till it has solved it. It used to be enough to say of a man, "He will never set the ocean afire," to consign him to dull mediocrity. Till he does set

the ocean aflame, let no man of science be accounted wise above his generation.

The grand advance to be made in electricity engaged the speaker's thoughts. We had made use of the speed, but had not mastered the power of the lightning. That which has such velocity, that which, instantaneously, makes iron run like water, must have the most terrific energy folded up in it; must have a hundred times the power of steam; must carry a storm in the bulk of a hogshead. When these problems in physical science shall have been handsomely solved, we may conclude that we have, as a human race, won our empire of the sea, as well as our conquest of the land.

The atmosphere still remains, but he did not think we should obtain much dominion in that element in our present state of attainment. Ballooning at best was a clumsy affair, and the birds we imitated could carry little weight. If a flying machine succeeded, it would only as a flattering experiment, and to make a journey by one would be like walking a long distance or crossing the sea in a row-boat. Successful, swift as a meteor, cheap and safe navigation of the air must be postponed until we have found something ten times lighter than hydrogen gas to inflate our air ships.

From air he passed to light, a subject in which beauty and mystery are more charmingly combined than anywhere else in nature. But this light, already a powerful agent in vegetable and animal chemistry, in all other natural chemistries, is even now employed as an agent, in some of the arts, in bleaching, dyeing, printing, and the laboratory of the photographer. The solar spectrum is a marvelous thing, and there is no end to the possible adaptation of it to human amusement, satisfaction, instruction and benefit, both natural and moral. The secret of landscape painting is certainly in the light; and our invention ought to do more than simply to shade it off, as in the pearl picture. The time must come when the sun and the prepared canvas shall furnish us better colors and forms, and groups and combinations, than ever grew up under

the hand of Zeuxis or Apelles, Raphael or Titian. And we are not to scorn the idea that, if the light can do such homely work as to bleach clothes and assist the laundress, there may be further great utilities and facilities in it, which shall work as many more transformations than the rains of heaven do, as the floods of light exceed the floods of rain.

Music next engaged the speaker's attention. He did not attach much importance to the unwritten music, the harmonies of the spheres, &c. One thought is that the possibilities of music as a science, have not been, all of them, reached hitherto. If all the possibilities of the science were reached already, and if all the possible instruments for the expressing of music were known, it would *seem* from analogy that *every* ear should be opened, and *every* nature charmed by it in some of the varieties. There are sights and scenes which every eye loves to behold. There are some articles that are agreeable to every *palate*. There are some odors that come up as fragrance into every nostril. There are some articles that give delight to every hand that touches them. And while it is so comparatively easy to find those things which shall regale all the senses of the great majority of any community at once, except the sense of hearing, it has frequently been a matter of surprise that there was no music which would find a willing ear in every individual. It would seem, therefore, from the analogy of nature and fact, that our music has not reached its limits in development, and that there are yet possible inventions of musical instruments, and specimens of musical composition, which shall have a power over all of us most subduing or exciting; a power more fraught with spells and witcheries than was ever the fabled harp of Orpheus, or the song of the syren.

He next spoke of the abodes of men, and said: Has it never occurred to you that men, the masses of men, live almost like the troglodytes still? What are human abodes made of? What are our dwellings? What are our cities? What more melancholy things are there than the sites of some of the famed cities of antiquity? How mortifying it

is to think that mankind can build of nothing that can last. Going to the places where mighty cities once flourished, what do we find? Usually fragments of stone, and brick, and pottery, and heaps of rubbish, and dust, and desolation.

Human abodes and human monuments should be built of the earth's metals or crystals; of metals that can not be corroded by air and water, as iron is; of metals that can not be easily tarnished at all; of metals that are as sweet and beautiful to the eye as Corinthian or choicest silver; and of metals that can be everywhere produced in abundance at the cheapest rates. Our clay-beds and sand-hills, at best, only gave us a "perfect brick." Could we release the crystal from these sands, the aluminum from the clay-beds in so large a quantity that our houses and ships might be built of them, they would last. Certainly it is not asking very much of our science, grown so great and so proud in these later years, that it shall furnish us, out of its more than two score of metals, *one* at least that shall be fit to build our houses and our cities of, so that they may continue after us, and be a joy forever. It is time we were building of something besides "wood, hay, and stubble," brick and mortar, and broken fragments of crumbling rock.

On chemistry and the chemical equivalents of starch and sugar, he said, though they are nearly identical, and can be, by a costly process, transmuted one into the other, no process has yet been made public, that I am aware of, in America, by which starch can be made into sugar, in a large way and cheaply. The question of the supply of sugar for the increasing use in the colder climates of the world, without resorting to the cane-growths of the tropics for the saccharine matter, is an important one, which may create revolutions in commerce, and modify the industries of some of the races of mankind. When fine sugars can be made from artichokes, potatoes, wheat, corn, and other cereals, as well as from sap, sorghum, beet-root, and sugar-cane, the sugar supply will be a question of chemistry, and will forever cease to be a source of perplexity.

Speaking of the power of the chemist to produce mainly by artificial processes, all the flavors, odors, and pleasant aromas which are found in the world's leaves, roots and flowers, and earth's minerals, &c., he said the people did not care a straw *how* the odor has been compounded whose fragrance is that of violets, roses, or new-mown hay. And the nostrils are educated by these fabrications to the enjoyment of sweet sensations, and are not disturbed by an inquiry into the history and extraction of the perfume. But when we come to the tasting organs, to mouth and palate, we are very fearful of the laboratory of the chemist, and of things artificially made. We are governed by our prejudice, when our reason will teach us that our prejudice is absurd. Slowly, indeed, we are coming to eat chemically prepared food, and to drink chemically compounded drinks. Nature's processes are, all of them, largely chemical in their way; and because the human chemist reaches results by more direct ways, we are childish enough to reject the results, even when we are not able to distinguish the artificial from the natural.

He then spoke of adulteration and artificial wines, and said:—Many of the articles with which food is adulterated, and drugs are adulterated, are, in fact, just as good, for the ends proposed, as the genuine article. They are cheaper in price, and are, therefore, improperly palmed off as genuine, and *there* is the wrong. If those who find out these cheaper articles would manufacture and sell them as substitutes for the real ones, but equally as good for the ends proposed by the use of them, while less costly, there would be good done, and not evil. And it may be regarded as one of the coming certainties, that we shall go to the chemists for a hundred things needed for the table, the chamber, and the nursery, which now we cultivate slowly, rear painfully, import expensively, or distil watchfully, because we can have them made to order artificially, of the best quality, and can pay for them out of a moderate income—science and art having made many of the most sumptuous articles and greatest luxuries of the olden times, the common possession of all laboring men.

Last of all, and greatest, is the dominion over man, over mind, over all the inner world, the problem of a true philosophy. The human mind has never been able to satisfy itself in regard to the origin of its ideas, and has never held to any self-consistent theory of mental development. Human speculation has flowed mainly in two channels, running nearly parallel, sunk deep into the heart of things, with a high promontory between them, difficult or impossible to be passed over. He then spoke of the two schools of philosophy and their leaders, Plato and Aristotle. The one regarded the mind itself as the source of its chief ideas, as soon as it came into certain conditions and relations. The other contended that the mind derived all its ideas from its sensations, directly or indirectly. The one class deduced—descended from general statements to the particular ones, from principles to their applications. The other class induced—ascended from particulars to the general law, and from observed facts up to the great principle. These classes were sometimes known as idealists and realists, or as spiritualists and materialists.

In our time, the two styles of philosophy are often known as the transcendental and empiric, or, better, as absolutism and positivism. The prominent modern names—on each side—are, some of them, these—Hegel, Hamilton, Cousin, Comte. The positive philosophy is particularly aggressive in the more recent years. It is advocated in England by Mansel, Spencer, Lewes, and Mill. But we can not go wholly with either great party; nor can people generally do so. The world has groaned long with this struggle. Civilization has been retarded by it; truth has suffered from it. The church has gone laboring between them, like an ocean steamer in rough seas; with now one wheel clean out, and now the other, while the opposite one has been, at the same moment, so submerged as to do poor service, or none. There is need, therefore, of a philosophy which shall not call itself the philosophy of the absolute, nor the philosophy of the conditioned, which shall take, if possible, middle ground between them, and take all the truth from both of them, and combine them into a harmonious whole. And this is the problem in mental philosophy

now before mankind; and all metaphysical men should give long and earnest attention to it. They should do so all the more hopefully, because the extreme absolutists and the extreme positivists have rushed around in different directions from opposite positions, into nearly the same cavern of darkness—falling off into almost the same black abyss. The extreme positivist, at the end of his research, can find no God at all. The extreme absolutist, at the utmost line of his speculation, as yet, can find no God but *Pan*. Between the two we should utterly refuse to make any choice. It belongs to our time to frame and build out that philosophy which can logically distinguish between essence and phenomena, substance and property, the Creator and the creation, the Maker and man, and the human being and the Divine Person, and rightly deal with them. The chariot of our progress can not long go upon a single wheel. The movements of both of the philosophic tendencies are required to roll on the vehicle to conquest. And if wisest hands shall guide its steeds, its track shall smoke ere long, but with the dust of stars. And then, one of the grandest conditions of rest, joy, and hope for our human race, will have gladdened the world.

It is by looking away from the accomplished to the unaccomplished, that we get our bearings, lose our pride of attainment, see our failings, admit our deficiencies, and regulate our attitudes. We have need to remind ourselves that our century is only one of the centuries of time, and not a *very* advanced one at that; that we simply walk the corridors, and enter a few of the outer courts of the great temple of truth eternal; that it is reserved for those more favored, if not better men, who shall live many ages after us, to possess themselves entirely of the glorious structure, penetrate to its interiors, behold its splendid adytum, handle its sacred arcana, and congratulate, disport, and regale themselves within that vast rotunda, whose light streams through a dome of solid crystal, without flaw or fracture, and paints the scene within with such a charm, in such a beauty, as never was on land or sea.

And thus, also, in our little individualities, each working

so much alone toward its destiny, we cling and creep, snail-like, up the steep and broad incline of fact, and thrust out for a time, tentatively, into those empires to be, the long antennæ of our knowledge gained, tipped with the eyes of our faith. And then we retire, leaving, at least, our shells as the way-marks of progress, to grow more shining and translucent in the light of suns, and as clear white specks signaling the march of Eternal Wisdom across the wastes of time.

The orator retired to his seat amid the plaudits of the audience, whose attention he had riveted on himself from the first sentence to the last word.—*S. F. Bulletin.*

A MIDSUMMER NIGHT.

'Tis summer's night, and Earth a bride is dressed,
With silver lamps hung round her azure walls;
And where Day's rosy footsteps late had pressed,
The purple drapery of the evening falls.

The air is sensuous with the breath of flowers,
Whose parted lips are drunken with delight;
And on the pathways of the languid hours
Come thousand whisper'd mysteries of the night.

The winds are resting in their hidden deep,
Or coyly hide within the trembling leaves,
Where dreaming swallows twitter in their sleep,
In airy nests beneath the frowning eaves.

Down by the margin of the throbbing sea,
The silent tide comes creeping on the land,
Save where o'er rocks it rippling glides away
In gurgling murmurs on the yellow sand.

Along the currents of the sultry air,
With drowsy tongue, Time counts his ceaseless flight;
And Slumber spreads her robes o'er joys and care,
While souls like sea-birds fold their wings in night.

Within the calm repose and dreamy hours,
Ecstatic peace around my life is thrown;
And 'mid the fragrance of the drooping flowers,
Soft lips like rose-buds seem to press my own.

And now the moon rolls up with ruddy glow,
  And tips with silver each far shadowy hill;
The starry hosts march onward dim and slow,
  While Nature sleeps, and Earth grows lone and still.

Night lies recumbent on the breast of space,
  And folds the worlds around with brooding wings;
The Earth in moonbeams veils her dusky face,
  Where tranquil rest pervades all living things.

HERBERT C. DORR.

MEDICAL TOPOGRAPHY AND EPIDEMICS OF CALIFORNIA.

CALIFORNIA has the most varied climatology of any territory of equal area in the world. This, with its diversed topography, its altitudes of eternal snow, its gigantic forest growths, its extensive tulares, with arid basins and irrigated bottom land, localize a wide range of diseases. And yet it is claimed that nowhere else are the elements of climate combined in proportion so congenial to the human system and so favorable to the development of all the intellectual and physical powers. The logical deduction from these facts is that the race born and trained up here, should have a type of development marked and distinct as the great physical features of the country. Certainly the children born here present many distinct and original traits. But we wait to see whether they make better men and women than their fathers and mothers.

The hydrography of the Coast Range presents some interesting phenomena. Thus, the Santa Anna River, the largest on the Southern coast, rising in Mount St. Bernardino and extending for one hundred miles, only reaches the sea in very wet seasons. The San Gabriel sinks and comes to the surface again. Many of the smaller streams sink, a few discharging by subterranean channels into the sea, and others are sponged up by the arid country through which they flow.

We have also the phenomenon of swelling springs and water-courses in dry seasons some weeks before the rainy season sets in. This is accounted for in part by the change from dry to moist winds. The diminished power of the sun's rays in the shortening days, causing less evaporation of springs and rivulets, which, having a uniform supply, there is a larger quantity of water coming to the surface and flowing off. An intensely hot day, or a dry north wind, will cause a sudden shrinkage, and the swelling will reappear when the wind or heat subsides.

In no other country in the world is there such a strange jumble of climates. The climate upon one side of a range of mountains is distinct from that on the other. The journey of a single day presents every phase from a semi-tropical to a semi-frigid climate. San Francisco is on the same parallel with Washington and St. Louis, and yet it has neither the cold winter nor the hot summer of these places. But if the wind currents cease to flow in from the ocean for a day or two the temperature is at a sweltering heat. Several instances of this kind have occurred during the present season. The mean temperatures of spring, summer, autumn and winter, at San Francisco, are 55, 59, 58 and 50 degrees respectively. October is warmer than July and August, and the mean temperature of the whole year in this city is 59.9. Once only the thermometer ran to 97, and as it often falls to 46 in July, a range of 41 degrees might occur within twelve hours.

California has a cloudless atmosphere for about two-thirds of the year, except on the sea-coast, where fogs are blown in from the ocean. These are charged with moisture. Hence the hills of the Coast Range will produce cultivated crops in the driest seasons.

The epidemics noted as prevailing in this State are such as are denominated *Contagious*, as Varioloid, Scarlatina, and Rubeola; *Infectious*, Typhoid, Typhus, and Spotted Fever; and *Meteorations*, as Influenza and Diphtheria.

Malaria fever occurs in low grounds and along water-courses. There is also a malaria known as the *Mountain Fever*, rarely or never occurring at an altitude below 7,000

feet. This form of disease, it is asserted by some medical authorities, is generated in low lands, and only modified by the new atmospheric conditions found at a high altitude.

Catarrhal affections prevailed extensively over the whole Pacific coast, from October, 1863, to February, 1864, but in very few instances did the disease result fatally. While there is now a great diminution of this disease, it still prevails extensively during our wet seasons, and yields very slowly to medical treatment.

The thermometric and barometric tables contained in the pamphlet are of great interest, and it is rarely that so much and so valuable local information is crowded into a smaller compass. — *S. F. Bulletin's Synopsis of a Pamphlet by Thos. M. Logan, M. D.*

HOW MOSAICS ARE MADE.

A TRAVELER writing from the European Continent says as follows: The mosaics seem to absorb the most time and money in the least space, unless it be in the gold decorations. We saw a table last week, less than six feet in diameter, which is said to have cost two hundred thousand dollars, requiring the labor of a large number of men for fifteen years in its production. On entering the hall where this kind of work is done, I could not doubt these enormous figures. Suppose, for instance, a thousand of the hardest and most expensive stones which will take a high polish, to be cut into pieces three-eighths of an inch thick. These pieces are cut the other way into small pieces like shoe-pegs, and where the shading from one color to another is sudden, these pegs must not be larger than a needle. Now the artist cuts and puts in these little pieces, selected according to their color, so as to give the coloring wanted by the workmen as distinct as though painted. Those pieces of pegs must be fitted so closely that lines of separation will not show, and set upon end, side by side, like type. They claim that ten thousand different shades of color are necessary; and in

order to do this kind of work, a man must be skilled in colors and shades as a painter, in order to place the colors properly; then be the most careful and accurate mechanic in order to fit the pieces, and then he must have patience enough to work on the cheapest and coarsest pictures one year, and upon a fine one from ten to twenty years.

BIG WAVES.

WHEN the great ocean is disturbed it forms surface waves, which are sometimes of great magnitude. In a gale, such waves have been more than once measured, and it is found that their extreme height from the top to the deepest depression of large storm waves has been nearly 50 feet, their length being from 400 to 600 yards, and their rate of motion through the water about half a mile a minute. Such waves, breaking over an obstacle of any kind, or mingling strangely with the clouded atmosphere raging above, are the wildest, grandest, and most terrible phenomena of nature. When they approach land, they break up into much smaller bodies of water, but these are often lifted by shoals and obstructed by rocks till they are thrown up in masses of many tons to a height of more than 100 feet. The tidal wave is another phenomenon of water motion of a somewhat different kind, producing an alternate rise and fall of the water over all parts of the ocean every 12 hours. In addition to the true waves there are also many definite streams or currents of water conveying large portions of the sea from one latitude to another, modifying the temperature of the adjacent land, and producing a mixture of the waters at the surface or at some depth which can not but be extremely conducive to the general benefit of all living beings.

Storm tides, or those waves which occasionally rush without any pause along narrow and confined seas or up funnel-shaped inlets, have occasionally proved disastrous to a

fearful extent. Thus it is recorded that upward of 100,000 persons perished in the year 1232, and again in 1242, in this way, numerous complete villages and towns being washed away by a wave advancing from the North Sea over the low lands of Holland. Between Nova Scotia and New Brunswick the ordinary spring tide often rises to a height of 100 feet, sweeping away the cattle feeding on the shore.—*All the Year Round.*

THE ANCIENT MINT OF CALIFORNIA.

It seems that they had in the vicinity of Santa Barbara the original California Mint. The Indians of Tulare County generally came over once a year, in bands of twenty or thirty, male and female, on foot, armed with bows and arrows. They brought over panoche, or thick sugar, made from what is now called honey-dew and from the sweet Carisa cane, and put up into small oblong sacks, made of grass and swamp flags; also nut pipes and wild tobacco, pounded and mixed with lime. This preparation of native tobacco was called pispewat, and was used by them for chewing. These articles were exchanged for a species of money from the Indian Mint of the Santa Barbara rancherias, called by them "ponga." This "ponga" money consisted of pieces of shell, rounded, with a hole in the middle, made from the hardest part of the small edible, white muscle of our beaches, which was brought in canoes by the barbarians from the island of Santa Rosa. The worth of a rial was put on a string which passed twice and a half around the hand—*i. e.*, from the end of the middle finger to the wrist. Eight of these strings passed for the value of a silver dollar, and the Indians always preferred them to silver, even as late as 1833. This traffic the Padres encouraged, as it brought them into peaceable connection with the tribes of the Tulare Valley.—*Santa Barbara Gazette*, Sept., 1860.

PACIFIC RAILROAD INAUGURATION.—ADDRESSES AT THE FORMAL OPENING OF THE WORK.

THE skies smiled yesterday upon a ceremony of vast significance to Sacramento, California, and the Union. With rites appropriate to the occasion, and in presence of the dignitaries of the State, representatives of every portion of the commonwealth, and a great gathering of citizens, ground was formally broken at noon for the commencement of the Central Pacific Railroad—the California link of the continental chain that is to unite American communities now divided by thousands of miles of trackless wilderness. Among the assemblage were pioneers, who had assisted in laying the foundations of the Golden State, who had dreamed, toiled and schemed for years in behalf of this grand enterprise, and clung with steady faith, through many depressing defeats, to the belief that they would live to witness the consummation of their hopes; men who had more recently determined to devote their energies and their means to the execution of the project; representatives of the various sections of the State who appreciated the importance of the work to the whole Pacific coast, no matter where the line should be located; high officials whose presence and earnest approval enhanced the dignity of the occasion; divines to invoke blessings on the work; and last, but not least, directors, and contractors, who gave substantial assurance that the brain, the muscle, the gold and the iron were ready to make the railroad a reality. A noticeable feature of the inauguration was the patriotic character it assumed. The orators ascended from the level of material considerations to the contemplation of the work as a "bond of Union," and took occasion to rejoice over the recent declarations that henceforth the Union is to be indissolubly wedded to Liberty.

Two wagons, adorned with flags, drawn by horses that were also decorated with the national colors, were stationed near the rostrum, with earth ready to be shoveled out for

the railroad embankment. On one of these wagons was a large banner bearing a representation of hands clasped across the continent from the Atlantic to the Pacific, with the prayer of every loyal heart,

"May the Bond be Eternal."

Shortly after twelve o'clock M., Governor Stanford appeared upon the stand, and the ceremonies of the occasion were commenced.

C. Crocker introduced to the assemblage Leland Stanford, Governor of the State of California.

GOVERNOR STANFORD'S SPEECH.

Fellow-Citizens:—I congratulate you upon the commencement of the great work which, in its results to the State of California and the Pacific coast, and to the nation itself, is to be what the Erie Canal was to New York and the Western States. The work will go on, from this side, to completion, as rapidly as possible. There will be no delay, no halting, no uncertainty in its continued progress. We may now look forward with confidence to the day, not far distant, when the Pacific will be bound to the Atlantic by iron bonds, that shall consolidate and strengthen the ties of nationality, and advance with giant strides the prosperity of our State and of our country. The blessings which are to follow the completion of the work which we this day inaugurate can not be fully estimated. Agriculture, commerce, manufactures, wealth, and population, will feel its influence, and will commence with it a new era in progress. And we may rest assured that the results will be equal to the magnitude of the undertaking, which is one that will shed luster upon the enterprise, the energies, and the wisdom of our people. A few short years since, the pioneers of our State looked upon a field, magnificent, but wild and unexplored. The beautiful river at our side floated upon its bosom only the light canoe and reed raft of the untutored native. But, under the stimulus of American energy, how changed the scene. The stream, from its hitherto clear and undisturbed repose, is changed to a busy

channel, bearing the evidences of labor in the distant hills. With the pioneer appeared upon its surface the heavy and cumbrous barge, followed by the slow sailing craft, and soon by the noble steamer freighted with the wealth of a prosperous State, and alive with travelers urging that prosperity to its furthest limits. The Pacific Railroad will insure still another change; the wealth and the commerce of the East and the West is to float upon its waters, and it is to behold the busy denizens of two hemispheres, in their constant travel over the great highway of nations. It is to realize all this that we are assembled here to-day, and we should be happy in the enjoyment of so great and glorious a privilege. I feel honored that the ground in the progress of the construction of the Pacific Railroad is first broken by my hand; and as emblematical of the importance of the work, and of its appreciation by the people of the State, and their determination to perform what is now undertaken, it is meet and proper that the Governor of the State should be present and perform the first act of labor, and that we should invoke God's blessing upon the undertaking.

At the close of the Governor's remarks, Rev. J. A. Benton came forward and offered the following prayer:—

PRAYER BY REV. J. A. BENTON.

O Almighty and everlasting God! who ridest upon the wings of the wind and makest thy pavilion round about thee dark waters and thick clouds of the sky; who hast thy way in the sea and thy path in great waters; who didst speak, and it was; who commandedst, and it stood fast; by the wonderful working of thy hand the heavens unfurl their banners, and the earth loads herself with fruits and decks herself with flowers! We bless thee for the revelation of thyself in all thy works, and for that which thou hast done, and for all thy grace in permitting thy creatures to discover the secrets of nature, and make use of so many of the appliances of art. We bless thee for all the triumphs of art and civilization, for the steamers that plow the ocean, the locomotives that go with the speed of the wind, and the light-

ning which, harnessed, runs to and fro to do the bidding of men. We bless thee for all the knowledge given to us, thy creatures. We rejoice that thou canst make all things promotive of thy cause and kingdom in the world, that cause which is the cause of humanity, and that kingdom which embraces mankind. We bless thee for this propitious day, this happy hour, which we have waited for and prayed for through the lapsing years. O God, grant thy favor unto this enterprise; bless these directors and officers. May this enterprise, which is now inaugurated in thy name, go on speedily to its completion. Thou didst command in the words of thy prophet in the times of old, saying, "Go through, go through the gates; prepare ye the way of the people; cast up, cast up the highway; gather out the stones; lift up a standard for the people; prepare ye the way of the Lord; make straight in the desert a highway for our God; every valley shall be exalted, and every mountain and hill shall be made low; the crooked shall be made straight and the rough places plain. And an highway shall be there, and it shall be called the way of holiness; the unclean shall not walk therein; but it shall be for those, and the wayfaring men, though fools shall not err therein." In our humble way, and in this material form, we enter upon the first step of creating a highway for the people and nation. O Lord, deign to accept it as thy work. Let "the wilderness and solitary place be glad for it, and the desert blossom as the rose." Let it be a source of power to this great nation. Unite the nation again into a power which shall guard the freedom of the world. O Lord, let this be a bond of connection between the East and the West, between those vast expanses of ocean; let thy name be glorified amongst all the islands of the sea, and the inhabitants of this great commonwealth. May our city flourish, and be a city sought out and not forsaken; may the blessing of the Most High be poured out upon this work and all such enterprises, now and forever. Amen.

At the close of the prayer, C. Crocker announced that "the Governor of the State of California will now shovel the first earth for the great Pacific Railroad."

The two wagons loaded with earth were driven up in front of the rostrum, and Governor Stanford, with a zeal and athletic vigor that showed his heart was in the work and his muscle in the right place, seized the shovel, and, amid the lusty cheering of the crowd, deposited the first earth for the embankment. The enthusiastic Charles Crocker promptly called for "nine cheers," and the crowd, sharing his enthusiasm, cheeringly responded. The sun smiled brightly, and everybody felt happy, because, after so many years of dreaming, scheming, talking, and toiling, they saw with their own eyes the actual commencement of a Pacific railroad.

This ceremony ended, the Governor returned to the platform.

A. M. Crane of Alameda, President *pro tem.* of the Senate, was introduced, and addressed the assemblage as follows:—

SPEECH OF SENATOR CRANE.

Fellow-citizens:—I do not know what I can say to add to the interest of this occasion that has not already been an hundred times said, and better said than I can say. The great enterprise here this day inaugurated, is the consummation of a long, arduous, and finally successful struggle, waged often with faint hopes of success, persevered in against discouragements and obstacles of every kind, until finally success has crowned our efforts. This is an occasion on which we should gratefully remember the entire and laborious devotion of our delegation in both houses of Congress in finally securing the passage of the act which is destined to commemorate this great and magnificent enterprise. The future—who shall predict it? and what language shall be used even in a faint degree worthy of the subject, or the occasion? San Francisco and Boston, the two distant extremes of our continent, will then be united by one continuous and unbroken iron track, of over four thousand miles. How magnificent the idea! What a triumph of human power, and what an honor to the civilization of our age. Between those two distant points passengers may be conveyed,

at ordinary rates of speed, in the period of seven days. Starting from the metropolis of the Pacific, after an early breakfast, the passenger will lunch at Sacramento, and dine the same evening at Carson City. The rising sun of the next morning will find him half way between Carson and Salt Lake City, having during the night passed down the entire valley of the Carson and across the great desert, and on the evening of the second day he will dine at the wonderful City of the Desert. Having accomplished this first thousand miles, more or less, in thirty-six hours, our passenger, after the travel and rest of another night, will awake in the morning amidst the magnificent scenery of the South Pass of the Rocky Mountains—having passed during the night the mountain ranges lying between the great valley of Salt Lake and Green River, crossing this stream, passing up the valleys of the Great Sandy and Pacific creeks to the dividing ridge between the waters flowing to the Atlantic and Pacific oceans. As the sun of this morning shines forth, he will look out upon the most magnificent works of the Creator. Away to the northwest will appear the cloudy, snow-capped range of the Wind River Mountains—to the southeast the parallel ridges of the great Rocky range, rising one behind the other, displaying their whitened prominences, and in every direction the grand scenery of disjointed, isolated, and vast masses of rock, will make full and complete the splendid panorama. Passing amid the grandeurs of this scenery down the valley of the Sweetwater, over the dividing ridge between that and the Platte River, he will dine on the evening of this day at Fort Laramie, and, lying down to rest again, he will pass during the night rapidly down the great valley of the Platte, arriving on the following morning at an early breakfast at Fort Kearny. At this point, crossing and leaving this great valley, down which he has passed for so many hundreds of miles, he will pass over the emerald prairies of Nebraska, and dine on the evening of his fourth day at St. Joseph—having thus reached the Missouri River in three days and a half from San Francisco. This is the same journey which the early immigrants to our coast, myself among the number, accomplished only after a labo-

rious march of an hundred and more days; and we can now hardly realize the great change so soon to come, and which has been so imperfectly depicted. Nevertheless, it is a fact which will soon be upon us. It has been often, and again and again remarked, that we live in a wonderful age. This saying, from its frequent repetition, has become trite, but is none the less true. And yet how few of us really realize its truth. We are living in a wonderful—nay, in the most wonderful era in the history of our world. Since those of us now in the middle age have been upon the stage, more and greater advancement has been made in all the arts of civilization and human progress than in three centuries before. An unseen, imponderable agent, is made the conductor (no one yet has explained how) of thought; and from the farthest extremes of our country, now, day after day, as the conflict rages, we are informed of the tremendous conflicts and battles lost or won, ere yet the dead are buried or the wounded cared for. The wonders of photography I need not allude to—that most accomplished and finished of all arts, by which the rays of our great luminary are forced into the service of man, and made to paint, severely true, all objects at will. Other and former eras have been characterized as the age of bronze, or the age of iron—of gold—of steam—of thought—of right: and, after near a century of abasement and shame, our nation has now entered also upon the age of liberty. Let us for the moment glance at some of the most immediate benefits which are to accrue to the people of our own State from the construction of this great work. These benefits we shall begin to realize from the commencement. So soon as a section of the road is placed in working order, its advantages will become apparent, and the farther it proceeds the more and greater will these advantages become. Our yet scarcely developed mineral resources will receive a new impetus, and thousands of tons of ores containing the precious metals will be weekly delivered at extensive metallurgical works, yet to be erected here or at the Bay, by means of which, by more perfect machinery and higher appliances of art, the metals can be extracted more perfectly and with greater economy. By

this means, also, millions of tons, now esteemed worthless, in the usual modes of working, will be reduced at a profit. The copper ores, now being so abundantly discovered, will be rendered of increased value by the economy of transportation, and the low grades of those ores, now abandoned as worthless, will, for the same reason, be made available, and found to contain fortunes. The coal of our coast range will be afforded at low rates to the consumer; the granite, and marble, and other building rocks, will reach the centers of trade, and contribute to the erection of our cities and the adornment of our public edifices; and the timber of our mountain forests be rendered accessible for all the purposes of civilized life. Vast tracts of land, now lying in its virgin fertility, owing to the remoteness of markets, will be brought into cultivation. Our main centers of commerce will become the recipients of enormous increase in every branch of business, and, more especially, manufactures will be encouraged, and become promoted to an extent hardly to be conceived, and thus employment and fair remuneration be afforded to thousands. The facility of rapid communication, bringing, as it were, the city and country together, will lead to the development of many as yet unknown sources of wealth, and will induce capitalists to invest in enterprises now deemed unfeasible. When this great work shall be finally accomplished, and the iron track shall become a continuous highway across the continent, then the impetus to commerce, both domestic and foreign, that will follow, can hardly be conceived, and from this our State will reap a golden harvest. There will be saved to us and Nevada Territory, annually, at least three millions of dollars, which would otherwise be charged for freight and insurance, under the name of exchange, on the hundred millions we shall annually export of gold and silver. The country to be opened to civilization and settlement, lying between the Rocky Mountains and the Missouri, is of vast extent. The Territory of Dakota alone (which, by branches from the main road, will eventually be penetrated in all directions) is nearly as large in its extent as all the Southern States. Here are yet to be the happy homes of millions, and from it a cluster of new States will be added

to the galaxy of our mighty Republic. I need not speak of it as an arm of national defense, nor allude to the rich commerce of the Indies and South Sea Islands, nor to the entire change in the trade and travel of the world which it will effect. These have all been so often and so well presented by others, more ably than I can do it, that it would be but a waste of time to reproduce them. All that has been said, and more, now approaches its realization. A few years only will elapse,—probably within the lifetime of the largest portion of those present to-day—and what has been now commenced will be completed. Another great fact will then be added to the world's history. Then with truth we may say—

> "No pent up Utica contracts our powers;
> The whole boundless continent is ours."

Then will be celebrated an event. New York, Boston, Baltimore, Philadelphia, Cincinnati, St. Louis, Chicago—all united to Sacramento and San Francisco by iron bonds and golden links—meeting by their delegations our own, amid the grandest of Nature's scenery, will hold a jubilee of triumph at Pacific Springs, and engrave upon the great granite face of Independence Rock their memorial of the completion of this greatest, proudest achievement of man. Our sister city of the Bay will then, rapidly developed by the amazing increase of her commerce and manufactures, pass beyond any at present conceived limits, and sit proudly the queen of cities.—*Sacramento Union*, January 9, 1863.

A PHILOSOPHER ON LOVE.

BE our experience in particulars what it may, no man ever forgot the visitations of that power to his heart and brain which created all things new; which was the dawn in him of music, poetry, and art, which made the face of nature radiant with purple light, the morning and the night varied enchantments; when a single tone of one voice could make the heart beat, and the most trivial circum-

stance associated with one form, is put in the amber of memory; when we became all eye when one was present, and all memory when one was gone; when the youth became a watcher of windows, and studious of a glove, a veil, a ribbon, or the wheels of a carriage; when no place is too solitary, and none too silent, for him who has richer company and sweeter conversation in his new thoughts, than any old friends, though best and purest, can give him; when all business seemed an impertinence, and all the men and women running to and fro in the streets, mere pictures. For, though the celestial rapture falling out of heaven, seizes only upon those of tender age, and although a beauty, overpowering all analysis or comparison, and putting us quite beside ourselves, we can seldom see after thirty years, yet the remembrance of these visions outlasts all other remembrances, and is a wreath of flowers on the oldest brows.—*Ralph Waldo Emerson.*

ONE OF THE SEVEN WONDERS OF THE WORLD UNEARTHED.

A CORRESPONDENT of the Boston *Transcript*, in June, 1860, announced the recent discovery of the Mausoleum, one of the seven wonders of the ancient world. Everybody has read the story of Artemisia, that most inconsolable of widows, who, when her husband (her own brother, by the way), Mausolus, king of Halicarnassus, died, drank his ashes in her grief, and erected to his memory a monument, which, for grandeur and magnificence, was called one of the seven wonders of the world. Guided by Pliny and other writers, Mr. Newton pitched upon a miserable hamlet in Asia Minor as the site of this ancient wonder. Having obtained the consent of the Turkish Government, the next thing to do was to purchase the rights of the jealous occupants of the soil, a matter of no small difficulty. One old woman loaded her musket, and declared by the Holy Sepulcher that she would neither sell nor budge. However, on being offered enough money to pay the expenses of a pilgrimage

to Mecca, she came down. Removing the huts, Mr. Newton commenced his excavations, and soon had the satisfaction of handling portions of the famed Mausoleum, exquisite friezes in alto-relief, fragments of colossal lions, and of beautiful statues, some of which he was enabled to reconstruct. He ascertained that the great tomb was a quadrangular building, of about four hundred and twenty-one feet circuit, one hundred feet in height, surmounted by a pyramid, on the top of which stood a beautiful four-horse chariot, in which was the statue of Mausolus. This agrees with the ancient accounts of this magnificent tomb. It was erected more than two thousand years ago, about the year 353 before Christ, and Mr. Newton is of the opinion that it was cast down by an earthquake. That the fragments of this proud monument of human affection should now be dug up beneath the site of a miserable Turkish village, is a striking commentary on the changes and vicissitudes of the world's history.

REMAINS OF A FORMER CIVILIZATION IN ARIZONA.

HAVE spent much time since in Central Arizona, and have studied it pretty thoroughly. I have especially turned my attention to the previous occupation of the country by a civilized race, the probable cause of their destruction, and its subsequent occupation by the present race of wild Apaches and Pueblo Indians. It is a matter of conjecture when this race of people, who have left so many grand works behind them (now in ruins), first came into the country. It is presumed, however, that they must have crossed to this country by Behring's Straits, and traveled south until they found a suitable country to settle upon. There are but few remains of these settlements to be found north of the thirty-seventh parallel of north latitude, but south of that line and west of the one hundred and fourth parallel of west longitude the ruins of ancient cities and towns are found. Humboldt, Ward, Wilson, and Bourne, besides more recent explorers,

have given to the world a partial description only of the peculiar features of the former settlement of Arizona by a race far superior to the present aboriginal inhabitants, descendants of a people who cultivated many of the arts and sciences, probably brought by them from the climes of Asia and Africa. My explorations in the central portion of Arizona have been prolific in bringing to light many new features of the ancient occupation of the country not seen by the explorers who have preceded me since the year 1805. I find that the reports of Father De Nica are in the main true. The towns which he gives an account of are traceable from the Casa Blanca to the present towns of Zuni and Moqui. I date the period of the destruction of these towns from 1569, and since the visits of De Nica and Capt. Espejo. These conclusions are arrived at from geological appearances, and the fact that those cities and towns were destroyed by volcanic convulsions. Ruins of former habitations are everywhere to be found in Central Arizona. Traces of acequais, or canals for conveying water to supply the inhabitants, are seen in many places. Inscriptions on rocks several hundred feet from the valley below, and perpendicular, note with accuracy the former condition of the country, showing that there did exist lakes of great size, which communicated with the ocean—as Inscription Rock on the Piscado near Zuric, the bluffs of Moquis, those of Ojo del Gallo, and the basin of Owens River plainly indicate, the outlet of the latter being at Red Rock Cañon.

Returning to the ruins which mark the occupation of the country by an industrious people: it is evident that there were in this pre-historic age many of the arts and sciences. Of all the towns and cities which were destroyed by the convulsions of nature, there remain but the ruins of Zuni and Moquis—the latter in a perfect state of preservation—and parts of Oraiba and Cosnina. The two latter are pueblos, near the Cosnena Caves, at the eastern base of the San Francisco Mountain. Moquis is built principally of stone, upon a high *mesa* of old red sandstone, and approached by steps cut in the rock. The buildings are of primitive character, flat roofs, and three and four stories high. The inhab-

itants enter their houses by means of ladders, ascending to the first flat roof, and descending to the chambers through an aperture by the same means. The houses of both Mosquis and Zuni are plastered inside by a durable cement, found close at hand. These Indians have a dialect of their own, which they allege is purely Aztec, and the same language used by Montezuma. They cultivate the soil, raise sheep, goats, horses, and cattle, spin and weave cloth in the most primitive way, and reduce their grain into meal by rubbing it between two stones, each family being provided with an apartment set apart especially for that purpose. They have at all times been friendly to the United States.

The number of ancient towns and cities which at one time graced the central part of Arizona was about two hundred; some of them were densely populated; and it is evident that the inhabitants were a warlike people, and understood the art of war to a considerable degree, from the great number of fortifications still to be seen all over the country. That they carried on mining on a large scale, for gold, silver, and copper, and were well acquainted with gems. The turquoise is still held in great esteem by the Zunians and Moquis. Traces of reducing works for metals are found in many places throughout the Territory. The agricultural and mineral resources of the country will form the subject of the next paper—in which localities will be spoken of in detail, especially the gold and silver deposits, ruby, opal, diamonds, and other gems known to exist in certain parts of the Territory.—*Correspondence S. F. Bulletin.*

EXTRACTS FROM AN ADDRESS BY JOSEPH W. WINANS, AT THE STATE AGRICULTURAL FAIR, HELD AT SACRAMENTO, SEPTEMBER 12, 1856.

F the three great producing interests of society which constitute the sources of national and individual wealth—commerce, agriculture, and manufactures—important as each is in its relation to the general prosperity, it can hardly be denied that agriculture occupies the first and manufactures the second rank in the promotion and development of public security and virtue. For commerce, while it oftentimes rolls in a tide of opulence which augments the nation's influence and wealth, yet it scarcely ever fails to end in corrupting the habits and undermining the principles of society by substituting luxury, licentiousness and enervation for enterprise, morality and vigor. And such is the lesson of all antiquity, from Tyre, in the far olden time, down to the declining day of Rome. In the contrast between commerce and agriculture are involved some of the gravest questions of political economy. Commerce, in the main, is a producing agent from abroad; agriculture is a developing influence at home. The one creates weakness and diffusion in the State by denying to its existence a self-sustaining power, and drawing from extraneous sources its means of support; the other brings forth and husbands the resources of the State, and causes it to derive from itself the material of its own advancement. It is the difference between the man who, having stored his mind with the acquisitions of others, becomes eminent for learning, and him whose mind, by its creating power, flashes from within the fires of genius—that difference which lifted Homer above Varro. The same contrast exists, also, between commerce and manufactures.

In considering the claims of agriculture we are first struck with the spectacle of its great antiquity. When the Divine fiat first cursed the ground, for Adam's sake it then decreed

that from the earth, man's bread should thenceforth come. And ever since that early day when it was declared that the sword should be turned into the plowshare, the plow has been the universal and perpetual emblem of peace, prosperity and plenty. Stretching backward for its mythologic origin into the shadows of that era when, by the inspiration of Ceres, Triptolemus became the inventor of the plow, agriculture has always been, from the remotest age of fable, a source of blessing to every nation and to every clime. It was this pursuit which gave character to the Saturnian or Golden Age—that reign of purity and peace on earth when the people were blended in harmony, and all was primitive and simple in the thoughts and deeds of men, and human nature glorified itself in universal brotherhood, and lawlessness and violence were utterly unknown. Of this happy period saith the historian: "The King of Heaven (Saturn) employed himself in civilizing the barbarous manners of the people of Italy, and teaching them agriculture and the useful and liberal arts. His reign was so mild and popular, so beneficent and virtuous, that mankind have called it the Golden Age, to intimate the happiness and tranquillity which the earth then enjoyed." Visions of that rare beauty which rendered the Golden Age the more resplendent era of the world, and agriculture the noblest of pursuits, occasionally gleam down the descent of centuries through the didactics of Hesiod, the idyls of Theocritus, the pastorals of Bion and Moschus, the georgics and bucolics of Virgil. Let me not weary you in dwelling thus upon this period of time, for I regard it as strikingly suggestive of that amazing advancement in prosperity and progress which an agricultural people may attain at any period of the world's history, now and hereafter, just as well as then. Another incident connected with that era is not without its lesson and example at the present time. On the statues of Saturn were hung fetters, to indicate the chains which Jupiter had once imposed upon him. For this reason it became a custom that all slaves who had acquired their freedom should dedicate their chains to him. And what more appropriate dedication of their fetters, in this great

natal day of freedom, could the enfranchised millions of our former slaves now make than to devote them, not to Saturn, but to Agriculture, that pursuit of which he was the illustrious developer and patron. If this large and most perplexing element of our people shall have their industry directed, as a mass, through voluntary, compensated labor, to the culture of the soil, not only their condition, but the welfare of the nation will be essentially improved.

Again, agriculture is the truest and most reliable source of national wealth. This view does not design to disparage manufactures, of whose large influence and value we shall speak hereafter. It has been shown that commerce, while it pours in a broader stream of luxury and affluence than agriculture, has a more demoralizing influence upon men and manners. But the wealth of agriculture is attended and ennobled by a train of moral consequences; that of commerce is only useful in its material form. The one vitiates, the other simplifies the habits of the people; the one undermines, the other stancheons the bulwark of the State. The wealth of agriculture is that whose value comes from its sufficiency to satisfy the wants and the desires which it provokes. It is that wealth which Seneca describes in saying, "If you live to opinion you never will be rich; if you live to nature you never will be poor." The primitive pursuits, the simple tastes, the limited cravings of an agricultural community are bounded by their acquisitions, and contentment cheerfully supplies the place of opulence. Not so with those riches which are gathered from the spoils of war or the commercial intercourse of nations, for these are evermore creating that insatiable thirst for profusion and display; that love of splendor which vents itself in the boast, "I will tear down my barns and build greater." Nor is agriculture without its liberal tribute to the material resources of the State. Plutarch tells us that at Rome the public treasure was kept in the temple of Saturn as an intimation and monition to the people that agriculture is the source of wealth. And such was the theory of the Roman empire in the great day of its grandeur and renown before the Augustan age, and the

luxury of the succeeding generations had sapped the foundations of its virtue and its strength. In further illustration of our argument, we refer to the fact that next to gold and silver, which, from their peculiar adaptation, form an arbitrary standard of value, and are therefore used as money, come the products of the soil, which constitute a secondary standard, being frequently employed as a substitute for money and used as a medium of exchange. This is especially the case in the Western States of the Union, where whole communities exist by bartering the productions of the earth for the commodities of traffic, and especially for family supplies. If gold and silver have a standard, and, comparatively speaking, an unchanging value, so, within a more limited degree, have wheat and barley. It is a source of gratulation that this system has been freely adopted in our own State, so that a custom has arisen and is growing into favor among farmers in the agricultural districts to procure their commodities from the neighboring towns upon a temporary credit, and pay the debt in grain after they have harvested their yearly crops.

Again, agriculture stimulates and fosters the patriotic sentiment of a people. While society around him is shifting, transitory and unsettled, prone to the spirit of adventure or the temptations of a nomadic life, he who tills the soil becomes, as it were, a portion of its substance, acquires an attachment for the associations which surround him, grows fixed and local in his inclinations and his habits, and permanently plants his household gods amid those scenes where his broad acres spread to form a possession for himself, a patrimony for his children, and where he fancies that a brighter landscape greets his eye and a sweeter music carols in his ear than anywhere on earth beside. And thus he learns to love the country to which his fortunes must forever cling. As the roots of a tree derive their nourishment, so the foundations of society derive their strength from the culture of the soil. It was her devotion to agricultural pursuits that rendered Poland so glorious in her struggle against tyranny—so deeply imbued with the spirit of freedom that the whole civilized world grew sym-

pathetic in her cause, until the very name of Pole, whether applied to those who chafed at home under the thrall of despotism, or those who were sorrowing abroad in exile, became a symbol of the love of country. But the influence of agriculture stops not here. With its promotion comes a consequent decrease of crime. Not in the quiet homes of husbandry which dot the hill-side and the plain; not where the farmer's broad domain invites to daily toil and sweet repose; not where the valleys sport and glow with the rich plumage of the nodding grain, does guilt abide or skulk or dare to show its face, but in the crowded dens and poisoned haunts of the corrupted city, where misery and vice hold carnival, and all which greets the eye or sense attests the truth of the quaint maxim that "God made the country, but man made the town." No. The spread of farms is fatal to the growth of penitentiaries.

It is equally a noticeable and gratifying fact that in California, as men gradually lost those vagrant habits and turbulent propensities which pertained to their earlier condition, no longer devoting themselves exclusively to the precarious pursuit of gold, but settling down into the more regular avocations and industrial employments of cultivated life, the taste for agriculture has progressively increased, and a higher tone of morals has succeeded. And still this tide of progress rolls along in ceaseless flow, like the tremendous march of ocean. For the first age of California was not an age of gold, though gold was the sole object of its energetic search. That was an age of iron. The old order of the ages was reversed, and the golden age of California, succeeding the age of iron and the age of brass, was destined to come last. It came when men had learned to realize that the true gold for which they were to labor was not that which glittered in the bowels of the earth, whose search corrupted, whose attainment planted in insane asylums those who sought it, but rather that more precious gold which waved amid the yellow corn and spread its splendor on the tasseled grain.

This fertile spreading valley of the Sacramento and its extensive tributary waters, embracing an area so vast, a

soil so rich, a productiveness so marvelous, that it seems to have been created in nature's sunniest mood; this opulent expanse of glebe which centuries have fattened, lying open to the reach of all who covet its possession, and giving forth its liberal increase so glibly as to often yield spontaneous growth, has now become the field and the incentive for the welcome toil of tillage and of culture. Stimulated by such powerful inducements, agriculture is constantly acquiring an increased extension and importance in spite of the meagerness of our populational increase, and, in the proportion of its own enlargement, has aided in promoting stability and order; has improved the moral standard; has prompted a larger disclosure, a more abundant use of our resources with an added dependence upon them for our support.

California is a remarkable and a peculiar State. Stretching from north to south through a sweep of latitude embracing ten degrees; spread out between a chain of mountains and the sea; sentineled upon the east by giant cliffs and on the west soothed by the ceaseless murmurings of ocean, its rugged form presents the rarest features of the wonderful and picturesque. Where, in the wide circuit of the globe, does the tourist find a grander spectacle than the majestic elevation of Mount Shasta, the vast gorges of Yosemite, the Geysers with their frightful chasms and preternatural uproar, the colossal forms of the big trees of Calaveras, or the glittering splendor of the Alabaster Cave? Within its strange diversity of soil and climate it seems to embrace the qualities of every zone. Beneath its surface lurks the costliest store of minerals and precious metals, while through its forests, skies, and waters range all varieties of game, from the huge grizzly to the hare; from the wild turkey to the plover; from the salmon to the mountain trout. It rears the frigid pine and blooms with the magnolia. Its gardens and orchards teem with fruit, whether it be the hardy apple or the delicate pomegranate, the quince or the orange, the peach or the banana, the cherry or the fig. From its prolific soil comes every form of vegetable life down to truffles, artichokes, and mushrooms. Nowhere else within the limits of a single State do

such profusion and variety appear; nowhere else can such rare contrasts be enjoyed.

Among all the divisions of the agricultural department, it is safe to say the culture of the vine stands foremost. Of our entire resources, without exception, this will ultimately prove most valuable, and its future magnitude is quite beyond the reach of calculation. The extraordinary adaptation of California for the cultivation of the grape arises from the geniality of the climate, their regularity of the surface, and the fertility of the soil. No other single State upon the surface of the globe exhibits such a vast expanse of territory undulating in hills and valleys. And these, through an extent of hundreds of miles, are formed so as to present precisely that exposure which is demanded to give flavor to the grape. Although this department is still in its infancy, yet we are discarding all the exaggerations of the press and speaking within reasonable bounds when we rate our present annual yield of wine at upward of a million and a half of gallons, while the number of young vines already planted and hastening on to their maturity is incredible. When we consider that the extent of land suitable and rapidly coming into use for wine-growing is greater, as has been authoritatively stated, than all the grape-producing area of Europe, and reflect that three hundred thousand vines and upward may sometimes be found in a single vineyard, we are lost in the magnitude of the subject. Notwithstanding the recent origin of our wine manufacture, the evidence is multiplying around us that wherever it is prepared by experts who are skillful and experienced, and the grapes are taken from a good location, our wine bears favorable comparison with the products of many of the European vineyards. It now enjoys a higher reputation and more just appreciation abroad than at home; in New York than in San Francisco. Every year's experience will improve its mode of manufacture and the quality of grape from which it is produced, besides imparting to it, before long, the indispensable character of age. Already do our wines comprise a valuable source of export, finding their way in limited but choice supplies to every market of the globe. And when we contemplate the startling fact that

many of the old European vineyards are failing and others have quite given out, while the world's demand for this great luxury is constantly increasing, we may well believe that California, with her virgin soil enriched by the accretions of all former time, with her million hills rich in the elements of inexhaustible supply, will finally supplant the effete soils of Europe, and become the vineyard of the world. Even the knowledge of our great productiveness and the prospective choiceness of our wines has not yet reached the apprehension of the epicures of London or Vienna, but the time will surely come when the former rule will mainly be reversed, and the homage paid so long unto the wines of Europe will be repaid by Europe to our own. It must be so, because our soil, our climate, our formation, all conspire to prove that we can soon produce the richest qualities of grape, and in such copious profusion that we shall never need to quicken our supply, as Europe does, by deleterious aids, but shall be always able to make our production the unadulterated, pure juice of the grape. Another and not unimportant consequence arising from the cultivation of the grape is, that the use of wine as an article of home consumption is supplanting and decreasing the demand for ardent spirits. Our earlier wines were strong and heady, but more recent manufacture has rendered them comparatively light and harmless. As stimulants in some form seem to be an indispensable requirement among every people, that form which is most innocuous is best promotive of the public welfare. It has been observed that wherever the vine is cultivated throughout Europe, the use of wine becomes general among all classes, and especially among the yeomanry, to the exclusion of more harmful stimulants. And surely, with the facilities which we enjoy for producing the choicest effusions of the grape, we may hope ere long to see King Alcohol dethroned among our people, and his reign subverted by the milder products of our own domestic vintage.

Of the three great kingdoms of production, agriculture had the earliest origin, and after that came manufactures, and then commerce. The first dates backward to the Adamitic era, the second to the period of Tubal Cain, while the

last owes its inception to the enterprise of Tyre. That genius for invention which constitutes the spirit of the age, has given unto manufactures a commanding prominence. And yet, among all the wonders of modern invention and discovery, we find nothing to surpass those stupendous achievements of human ingenuity and skill which belong unto the ancient world. What though we can flash thought round the globe by electricity and span the earth with steam, yet, with all our progress, we can not rear a pyramid, or carve a sphinx, or build an Appian way. What combinations of skill and labor have been able to restore those lost arts which produced the bronzes and the coins of Greece and Rome, the Tyrian purple, the Corinthian brass, or the vases of Etruria? Who shall equal or revive the hanging gardens of Babylon, the Colossus of Rhodes, or the Temple of Diana? In this sharp contrast and rivaled grandeur of the old and new, there exists the cardinal distinction that what man's genius wrought in ancient times was wonderful but abstract; what it now contrives is marvelous but useful. A practical utilitarian design gives bent unto the thought and industry of the existing generation.

In California the retarded progress of the manufacturing interest has not been owing to an imperfect sense of its importance or to a deficiency in the industry or inventive talent of the people. In no other country does there exist a more profound skill for contrivance, or a more unremitting devotion unto labor. As a tribute to our invention, frequent patents are finding their way hither from the Patent Office at Washington. Although it is a popular conviction that the promotion of manufactures is largely essential to our prosperity, yet two causes have combined to interfere with this great interest—the scarcity of operatives and the high price of labor. Indeed, for years, and weary years, that slow increase, that almost absolute stand-still of population, which resulted from the double influence of a diminished immigration from abroad and a continued emigration from within, has retarded the advancement and almost paralyzed the energies of the State. How fortunate the reaction which is now going on; a reaction which has stimulated

into new life the enterprise of the people, and produced an effect so palpable that what was recently almost a retrograde, has again become a forward movement in affairs. Again, in the improved condition of the country, the population is enlarging, while the wages of labor are decreasing to that standard which political economy prescribes. With these advantages, with the possession of a territory whose formation and peculiarities present the greatest facilities for employing water-power and conducting every mode of manufacture, with the increased attention of the operative and the capitalist directed to this valuable interest, with the growing conviction of the instability and harmful tendencies of mining enterprises, what is there to prevent us from taking an early stand among manufacturing communities, and sharing the important benefits which they confer upon the citizen and State? Under the embarrassments heretofore existing, it is surprising what strides we have already made toward success. It is true, that beyond the quartz and grist mills, which are scattered through the State, the great mass of our manufactures and manufacturing investments of capital and labor is limited to the larger cities, and chiefly unto San Francisco. But so much money is invested, so much industry employed, so much material created, and such valuable fabrics wrought in this department, notwithstanding past impediments, that it now has the most complete assurance of success. Many a city, town, and village, which at first strove for commercial consequence, and then struggled through the sickly influence of failure and decline, will be relieved; and, by its conversion into an emporium of manufactures, will become a prosperous mart of the surrounding districts. Even the checkered fortunes of this city, the capital of the State, so long the victim of disaster from the ravages of fire and flood, might be repaired and her lost influence restored by turning in beneath her streets the waters of that river which has so often rolled above them, until what was once a scourge is converted to a blessing, sounding its praises in the music of the frequent water-wheel. This view of our condition as a manufacturing people, however strong the contrast between what we have done and what we can

accomplish, does not disparage our past efforts nor undervalue the extent of manufactures at the present time. In the recent annual report of this society it is correctly stated that "leather of the various kinds, boots and shoes, harness, saddles, whips, every description of cordage, building material, granite, marble, lime, plaster, cement, wagons and carriages; railroad, passenger, and freight cars; woolen goods, such as blankets of all kinds, flannels of every description; cloths and cassimeres, carpets; hats, caps, and various kinds of clothing; glue, asphaltum, gunpowder, matches, tar, pitch, resin, mineral paint, spirits of turpentine, salt, soap, yeast powders, starch, vinegar, pickles, every variety of preserved fruits, jams, raisins, figs, maccaroni and vermicelli, castor-oil, petroleum; wines, brandies, and the various kinds of spirituous and malt liquors; paper of every variety; glass bottles of every kind demanded, earthern and stone ware; wood, tin, and wire ware; mining, mill, and steamboat machinery, and machinery of every kind in use; agricultural implements and various other articles, are manufactured in the State with greater or less success; very many in sufficient quantities to supply the home demand and keep up a good and remunerative export trade, while others are struggling against the persevering competition of importation."

And this compendious statement, comprehensive as it is, gives but a glimpse of the reality. California is a paradox of production. In the strange antithesis which its versatility involves we find grouped together within the limits of a single State the shot-tower and the cotton-mill, the silk factory and the rope-walk, the refinery of sugar and the powder-mill, founderies of iron and manufactories of wool, glass works and oil-works; here an inceptive establishment for smelting copper and there a paper-mill; here a tannery and there an arasta. But if we are struck by this contrast and gratified by this variety, our admiration is enhanced in the consciousness that all, or mainly all, of the material which furnishes these institutions with their staple of supply is derived from our own soil, and that our native products have but begun as yet to find the means of their conversion into

manufactures. Already we number in the State about three hundred quartz mills, one hundred and thirty grist-mills, two hundred and eighty saw-mills, and forty iron foundries. In the manufacturing department of our industry, measured by the statistics of 1860, the number of establishments was three thousand five hundred and five; the capital invested, twenty-four million dollars; the value of the raw material, sixteen million five hundred thousand dollars; the number of operatives employed, twenty-four thousand; and the value of the annual product of manufactures for that year, about sixty million dollars. To these figures we may add an increase for the present year of nearly fifty per cent., which will cause our annual product to approximate a value of one hundred millions.

Christianity and civilization, those twin sisters of a birth divine, starting from the point where Eden bloomed, have been moving hand in hand together all through the ages, and all round the globe unto the utmost reaches of the West. And here to-day we greet them with glad voices and with loving eyes. When Jacob, gazing eastward for the Orient, declared that his blessings should prevail "unto the utmost bound of the everlasting hills," what other boundary of earth could he have thus foreshadowed than this fair land, whose rugged peaks fringe the Pacific's shore. That blessing, never failing, though pronounced so long ago, was designed to find its latest lodgment here, as the remotest point in stretch of distance and in lapse of time. Here, at this western margin of the globe, our pioneers have come into a heritage which rivals the prophet's picture of the land of promise; "a land of brooks, of water, of fountains and depths that spring out of valleys and hills: a land of wheat and barley, and vines, and fig-trees, and pomegranates; a land of oil, olive, and honey; a land wherein thou shalt eat bread without scarceness—thou shalt not lack any thing in it; a land whose stones are iron, and out of whose hills thou mayest dig brass." Nor is this all. For California was no less the offspring of political necessity than of divine appointment. By a wonderful analogy the des-

tiny of nations has followed that same law which ruled among the chosen people. And when the poet said,

"Westward the star of empire takes its way,"

his words were no less a delineation of the past than a prediction of the future. Yes, ever and forever westward has that star moved on from its first rising in the east. Asia beheld its earliest light when it illumed the pride of Babylon and Nineveh, and the kingdom of Darius. Europe next grew radiant in its beams when it gleamed on the might of Greece and Rome, and bathed the modern Powers in its rich effulgence. Yet, still it glided on to pour its latest splendor down upon America with a pervading glory that kept ever spreading on across the continent until it fell on California, the empire of the West, the land where grows the olive and the vine, where sounds the anvil and the loom, where shines the silver and the gold, whose wide extended sway, broad as the elements, controls the wave with Neptune's trident, the fire with Vulcan's hammer, the air with the caduceus of Mercury, and the earth with Ceres' teeming horn.

O California, prodigal of gold,
Rich in the treasures of a wealth untold,
Not in thy bosom's secret store alone
Is all the wonder of thy greatness shown.
Within thy confines, happily combined,
The wealth of nature and the might of mind,
A wisdom eminent, a virtue sage,
Give loftier spirit to a sordid age.

FREMONT AND SLOAT.

IN the spring of 1846, General Castro in the North, and Pio Pico, the Governor in the South, were waxing hot against each other, and preparing for new conflicts, when the apparition of Captain Fremont, with his small surveying party of old mountaineers, and the hardy and indomitable pioneers of the Sacramento Valley, and the Bear flag, put an end to their dissensions. Castro had himself prepared the way for this aggression, by driving Fremont and his surveying party out of the Mexican settlements, a few months before. The colony on the Sacramento necessarily sympathized with Fremont; and rumors, more or less well founded, began to run through the valley of hostile intentions toward all American settlers. But resentment, and anticipations of evil, were not the sole cause of this movement. There can not now be a doubt that it was prompted, as it was approved, by the Government of the United States; and that Captain Fremont obeyed his orders no less than his own feelings.

Fremont was still on the northern side of the Bay of San Francisco when the American flag was hoisted at Monterey, on the ever memorable seventh day of July, 1846.

Before the war, the Government of the United States had fully determined, so far as that matter rested with the executive, upon the conquest and permanent retention of California, as soon as the outbreak of war should offer the opportunity. Orders, in anticipation of war, were issued to that effect, and it was under these orders that California was actually taken. The danger of that day was, that England would step in before us. Her ships were watching our ships on the coast of Mexico. The British pretext, it is said, was to have been to secure an equivalent for the Mexican debt due to British subjects; and it is understood that there was a party here who favored this design.

Because Commodore Sloat did not rush to the execution

of the orders issued in anticipation of war, on the very first report of a collision between the United States and Mexico, the anxious Secretary of the Navy, dreading to lose the prize, hotly censured him in a letter, which reached him after the event had broken the sting of its reproaches, and served only to assure him how well he had fulfilled the wishes of his Government. The flag of the United States was no sooner flying, than the Collingwood entered the Bay of Monterey. There had been a race between the Collingwood and the Savannah. What a moment was that for us, and for the world! What if the Collingwood had been the swifter sailer, and Sloat had found the English flag flying on the shore! What if we had been born on another planet! The cast was for England or the United States, and when the die turned for us, the interest was at an end.—*Randolph's Oration before the Society of California Pioneers, San Francisco*, 1860.

A RAINY DAY IN THE SIERRA BUTTES.

I HAD planned to make an ascent of the Buttes, but the morning broke cloudy and rainy, much to my discomfiture, and I closed my heavy eyes to sleep, with the consoling reflection that I was spared another hour of somnolency. And it was not until after the small excitement of breakfast that the utter desolation of my situation broke upon me. What would I do, all this rainy day, with no companionship, save the rough miners, with whom I had so little acquaintance? Books there were: the inevitable "Patent Office Reports" and "Louisa, the Lonely Orphan"—to the latter of which I desperately betook myself, though my eyes often wandered from the turgid page to watch the wreaths of mist rolling down over the rugged face of the Buttes, or the rain falling in slanting sheets between the sides of the ravine on which the house is situated; morose, from its dampening influence, "Buttes," the dog, crouched beneath

the long table, and the draggled rooster skulked ingloriously, under a manzanita bush. But after a few hours of patient fretfulness, the rain "held up" a little, and throwing aside the sorrows of the "Lonely Orphan," I gladly sallied out to the hill-side opposite.

On my way across the ravine I found a green-looking snail, buff-colored, round, and about three inches long; a repulsive looking fellow, slimily slipping over a broad green leaf. I wonder how it would seem to be a snail, carrying one's house and home wherever sweet fancy led? If ignorance be bliss, the snail must be a happy fellow, as he slides along inanely through life. But there are many human snails, lymphatic, lazy creatures who know neither joy nor sorrow, from the cradle to the grave, and spend life about as agreeably to themselves and others as this fat fellow whom I left on his slimy roost. It was hard work climbing up the steep mountain side, slippery as those famous stairs up which James Crow was fabled to have performed such gymnastic feats. To add to my growing perplexity, the rain began to fall again, and I was fain to seek shelter under the lee of some projecting rock, while the eddying gusts sent me forth again: just so a man sometimes seeks in domestic bliss shelter from the woes of the outer world, only to be driven forth again by the ill-tempered wife.

The rain fell pitilessly; my thin boots were wet through, and the sharp quartz cut them like glass. Scrambling up the wet hill-side, I discovered, with joy, a huge sugar pine, whose trunk had been hollowed by fire, and offered a roomy retreat for me from the storm without. Here I ensconced myself and gazed with undisturbed serenity upon the "raging element," which fell in slanting torrents around me. Before me rose, in faint and fainter outline, the steep hills which mark the course of the Yuba, the fire upon their summits blending with the steel-blue, misty sky above. Eastward the firmament hung cold and leaden over Washoe valley, just as the clouds of adverse fortune have settled over the prospects of many a poor adventurer in that famous country. But they shouldn't have gone to

Washoe, but have come up to Sierra Buttes and made their fortune in some of the rich quartz leads which are crying out to be opened.

Away to the westward I discern a path of blue which I suppose hangs over the city which I call my home. City did I say? It scarcely seems that such an enormity exists—that there is a place where the din of machinery and the roar of trade burden the air. Here, so utter and so profound the solitude, that one thinks that such noises and sights must belong to another planet. Here the mists roll coldly over the silent tree-tops, the ceaseless rain patters on the leaves, the chickadee pipes in the branches overhead, the prying ant runs across my knee, and these are the only sights and sounds which meet the eye or ear. And as I sat here, watching the change of the air, my thoughts and fancies found vent in rhyme in some such disjointed way as this:—

Is there, beneath this world's expansive rim
Of circling hill, and grand old forest dim,
A more secluded or a moister spot
Where I could climb?—I rather reckon not.

Oh, can it be, that off there in the West,
Beneath that patch upon the sky's dark vest,
Just large enough, without a waste of stitches,
To make a Hollander a pair of breeches?—

Oh, can it be that there does still exist,
Below the blue and far beyond the mist,
Such things as bills, insufferable to mention,
Attachment laws, the enemy's invention?

Bonds, deeds and mortgages and such like trash,
Including that which worldly folks call "cash?"
And can it be that slander, pride, and sin
Grow rank, outside the hills which shut me in?

These pine-trees sighing on their rocky slope,
Have many a blasted top, not blasted hope;
The squirrel, safe beneath the firm-set rocks,
Cares not a nut for fierce financial shocks.

And here, remote from city and from plain,
"Unawed by influence and unbribed by gain,"
I, and the cricket and the chickadee,
Defy the world, within our hollow tree.

The rain ceased, the triangle rang out the hour of dinner in the ravine below, and so incontinently quitting my retreat, I descended to sublunary things. In the afternoon I made another exploration, and fortunately happened upon a cabin which appeared to be temporarily vacant. Here were books: Sears' Pictorial Abominations, Moore's Melodies, Fox's Book of Martyrs, and Abbott's Life of Napoleon, in which latter fascinating romance I forgot the inclemency of the remainder of the day.

JOHN RIVERSIDE.

DOWNIEVILLE, *Sept.*, 1860. *S. F. Mirror.*

THE GREAT EARTHQUAKE OF NEW MADRID.

THE greatest recorded earthquake, within the limits of the United States, occurred in New Madrid, then a small village upon the Mississippi, since in the State of Missouri. The agitations of this terrible convulsion commenced at 2 o'clock on the morning of the 16th of December, 1811. The inhabitants were aroused from their slumbers by a deep rumbling noise, like heavy thunder in the distance, accompanied with a violent vibratory movement of the earth from the southwest to the northeast, so violent at times that the people were unable to stand upon their feet without holding on to something for support.

It was dangerous to stay in their dwellings, for fear they might fall and bury them in their ruins; it was dangerous to be out in the open air, for large trees would be breaking off their tops by the violence of the shocks, and continually falling to the earth, or the earth itself opening in dark, yawning chasms, or fissures, and belching forth muddy

water, large lumps of blue clay, coal and sand, and when the violence of the shocks was over, moaned and slept, again gathering power for a more violent commotion.

On this day, twenty-eight distinct shocks were counted, all coming from the southwest and passing to the northeast, while the fissures would run in opposite direction, or from the northwest to the southeast.

On a small river called the Pemisco at that time, stood a mill owned by a Mr. Riddle. This river blew up (such is the expression used by the narrator) for a distance of nearly fifty miles, the bed being entirely destroyed, and the mill swallowed up in the ruins, and an orchard of ten acres of bearing apple-trees, also belonging to Mr. Riddle, nearly ruined; the earth in these explosions would open in fissures from forty to eighty rods in length, and from three to five feet in width; their depth none knew, as no one had strength of nerve sufficient to fathom them, and the sand and earth would slide in, and water run in, and soon partially fill them up.

After the earthquake had subsided, there was not a perfect row of trees left in this orchard—one-half destroyed, some leaning in one direction, others directly contrary; some covered to the limbs in these chasms as they filled up, and others with their roots turned entirely out of the earth.

Large forest-trees which stood in the track of these chasms would be split from root to branch, the courses of streams changed, the bottoms of lakes pushed up from beneath and form dry land, dry land blow up, settle down, and form lakes of dark, muddy water.

Where the traveled, beaten road ran one day, on the next might be found some large fissure crossing it, half filled with muddy, torpid water. It was dangerous to travel after dark, for no one knew the changes which an hour might effect in the face of the country, and yet so general was the terror, that men and women and children fled to the highlands to avoid being engulfed in one common grave. One family, in their efforts to reach the highlands by a road they all were acquainted with, unexpectedly came to the borders of an extensive lake; the land had sunk, the water

had flowed over it or gushed up out of the earth and formed a new lake. The opposite shore they felt confident could not be far distant, and they traveled on in tepid water, from ten to forty inches in depth, of a temperature of 100 degrees, or over blood heat, at times of a warmth to be uncomfortable, for a distance of four or five miles, and reached the highlands in safety.

On the 8th of February, 1812, the day on which the severest shocks took place, the shocks seemed to go in waves, like the waves of the sea, throwing down brick chimneys level with the ground, and two brick dwellings in New Madrid, and yet, with all its desolating effects, but one person was thought to be lost in these commotions.

The morning after the first shock, as some men were crossing the Mississippi, they saw a black substance floating on the river, in strips four or five rods in breadth by twelve or fourteen rods in length, resembling soot from some immense chimney, or the cinders from some gigantic stove-pipe. It was so thick that the water could not be seen under it.

In the Mississippi River, about five miles above what was then called the first Chickasaw Bluffs, but in later times Plum Point, was an island about three miles long, covered with a heavy growth of timber, which sank in one of these shocks to the tops of the trees, which made the navigation extremely dangerous in a low stage of the river.

About four miles above Paducah, on the Ohio River, a large circular basin was formed, more than one hundred feet in diameter, by the sinking of the earth, how deep no one can tell, as the tall, stately oak sank below the tops of the tallest trees. The sink filled with water, and continues so to this time.

For one whole hour the mighty current of the Mississippi was turned backward toward its source until its dammed-up waters were able to break through the barrier; boats were dashed to pieces and drifted about like feathers, or thrown out on the banks, while amid the awful commotion, loud rumblings were heard, and the electric fires flashed up and down and every way through the air. A few years ago,

it was said that forests and cane-brakes were still visible at the bottom of lakes then formed. The devastation extended over a tract of country three hundred miles long, from the mouth of the Ohio to the St. Francis River. In some places mud and water were thrown over the tops of the tallest trees, and great fissures broke in the ground, running uniformly from the northeast to the southwest. The people observing this, cut down trees at right angles with the direction of the fissures, and climbing thereon, escaped being engulfed.

Hundreds of these chasms were discovered seven or eight years after the calamity; and as late as 1846 they still appeared like artificial trenches dug by some great army. They were generally parallel, and ranged from ten to forty-five degrees west of north. The region is still called "The Sunk Country," and its extent along the White Water is some eighty miles north and south, and thirty miles east and west. Humboldt remarked that as one of the most wonderful convulsions known to history, since the vibrations continued through several months, and finally culminated in the destruction of Caraccas.

THE HAWAIIAN ISLANDS.

EARLY HISTORY OF THE ISLANDS.

THE history of these islands, commonly called the Sandwich, but more properly the Hawaiian group, is the history of mightier kingdoms of the earth, confined within a more limited range and condensed into a smaller space of time. The former name was given to the group by Captain James Cook, their discoverer; but it is not recognized in the constitution and laws of the islands, in which formal and authoritative records they are invariably called the HAWAIIAN ISLANDS, which is also the designation employed by the inhabitants. Since 1778, from which we date their discovery, up to the present time, the archipelago has

passed through wars, revolutions, plagues and pestilence, anarchy, religious persecutions, conversion to Christianity, and religious schisms, such as has required ages in the more civilized nations of Europe to accomplish. Civil war desolated the country until finally a Polynesian Alexander united under his sway the whole of the eleven islands, and the descendants of Kamehameha the First reign to this day. The islanders had their traditions likewise, which, of course, were mixed up with much superstition. A white man, who carried a god with him, and whose memory was worshiped, had come among them in the dim past; fragments of names from Tahiti, and memories of large canoes from the south, were extant prior to the time of Cook, and the islands were perfectly cognizant of the existence of that cluster. They also preserved the genealogy of their kings, going far into the remote past, to a period equal to a thousand of our years; and extraordinary events, such as great floods or earthquakes, or sudden risings of the sea, were always handed down from father to son. Many of their names have a similarity with those of Tahiti, New Zealand, and the Society Islands, and ethnography would class them with the Malay race. Names of some of the islands of the Marquesas are likewise to be met with, and a tradition still exists of a large expedition having been fitted out and sailing away in double canoes for Tahiti, returning after a lengthened absence with wondrous accounts of the fertility, riches, and climate of the place, and the exceeding fairness of the inhabitants. It is strange to note the influence which beauty has upon savages. The Sandwich Islanders, for some reason or other, have red eyes, and the thing that struck them most on the arrival of Captain Cook and his crew was the clear brightness of their eyes, and therefore it was that they were predisposed to pay them divine honors. They particularly noticed, on the other hand, the absence of the soft guttural tongue peculiar to themselves, and talked of their visitors as the men with the harsh voices. One can well understand Cook's men, accustomed to rough it in all climates, and with a certain propensity for rum, not having the most melodious voices.

EXTENT AND PHYSICAL CHARACTERISTICS.

Of the eleven islands that form the Hawaiian group, but six are of any consequence, and they are named as follows, commencing with the most northerly, in latitude 22, longitude 160, and ending with the most southerly, latitude 20, 19, longitude 155, 156; Kauai, 22 miles long and 24 miles broad; Oahu, 46 miles long and 25 miles broad; Molokai, 40 miles long and 7 miles broad; Lanai, 17 miles long and 9 miles broad; Maui, 48 miles long and 30 miles broad; Hawaii, 88 miles long and 73 miles broad. The other five islands called, respectively, Niihau, Kahoolawe, Molokini, Lehua and Kaulu, are but mere rocks, covered with brushwood or a stunted vegetation, and some of them the haunts of innumerable sea-birds.

Kauai.—Kauai, which is about seventy miles from Oahu, is a beautiful island, and perhaps the most fertile of any of the cluster. A fine broad river flows by the town of Waimea, fed by the mountains that raise their broad masses to the northward. This is, perhaps, one of the reasons of the fertility of this land. The high lands are all to windward, and whilst these exposed slopes are bare and precipitous, their southeastern declivities, sheltered from the rude wind, are covered with dense forests, and the mountain peaks, attracting the ocean-fed clouds, distribute their contents on the vales below. It is seldom that these heights are free from cloud or mist, and the constant rain forms miniature waterfalls that are continually bringing diluvium to the plains on the sea-shore. Besides the capital, Waimea, there are two other villages or small towns, called Waihea and Hanapepe; but the gem of the island is the late Mr. Wyllie's plantation at Hanalei. A small land-locked bay, with a valley extending some five miles inland, watered by a never-failing river, and the deep tropical vegetation that prevails all around, render this spot one the most beautiful in the island. The evidence of labor in the cultivated fields of sugar-cane, and the beautiful residence of the owner of the estate, add a charm to the scenery; the only objection to

the harbor being a dangerous sand bank, formed by the river at its junction with the ocean, which caused the loss of the king's favorite yacht, *The Pride of Hawaii*, in 1824. There is communication with Honolulu, by schooners and a small screw steamer. Kauai is famed for its mulberries, and the silk-worm thrives well in the unexposed parts of the island. The population of Kauai, in 1860, was 148 foreigners and 6,339 natives; being a decrease, since 1853, of 504 inhabitants. We shall have to speak of this decrease of population in the island, and its cause, further on.

Oahu.—We now come to Oahu, the most important of the group, on account of the town of Honolulu, the capital, being on it, and its port the only really known good one in the Sandwich Islands. Hilo, in the Island of Hawaii, was formerly the capital; but the discovery of a coral reef in the Bay of Honolulu, that formed a natural breakwater to the swell of the Pacific, caused the seat of empire to be removed there by Kamehameha the First, after he had subjected the Island of Oahu to his rule. The first view of Honolulu on entering the harbor is very picturesque; on the east is the landmark called Diamond Hill—so called because it was supposed that precious stones were to be found there; then, again, to the north, is another extinct crater—the well-known Punch Bowl Hill, on the top of which is a battery and telegraph. Behind the town are several small salt lakes, which are artificially dammed up in order to collect the crystals as they form by evaporation. From that stretches the lovely Nuuana Valley, the pride of dwellers in Honolulu—of which, more anon. The background to this lovely scene is formed by the Kona range of mountains, which rise to a height of about four thousand feet above the level of the sea.

HONOLULU.

You enter the Bay of Honolulu between two reefs of coral, on which the surf is ever breaking, and arrive at the harbor, where a hundred and fifty sail can ride with ease and safety.

This coral reef is gradually extending itself, and at the same time narrowing the entrance, so that some engineering will, at an early time, be necessary to keep the channel clear. One of the objects that strikes the voyager on his approach to Honolulu, is the large church built of coral, with a high, pointed steeple; but he will not, as formerly, be surrounded by a set of amphibious men and women, all of them clambering over the sides of the vessel and offering fruits, more or less forbidden. The spread of civilization, joined to the influence of the missionaries, has checked the unbounded licentiousness and dissipation that prevailed whenever a strange ship came to those shores. The hospitable inhabitants of Honolulu—and they are proverbially hospitable—always press the visitor to do two things: one is to ride round the island, and the other is to go up to the Nuuana Valley to the pali, or abrupt wall, that seems to forbid farther progress. Let us begin by the latter.

THE ENVIRONS, SCENERY, ETC.

You have a good breakfast, perhaps on some of the mullet that Kamehameha the Third built the fish-ponds for, and which are esteemed the delicacies of the island; your breakfast is washed down with a cup of the famous Kona coffee, you mount a horse which looks very like a mustang from California, and away you start on an eight miles' ride. Passing the beforementioned fish preserves and salt ponds, you enter upon what may be called the kitchen garden of Honolulu; here you see the taro, the botanical name of which is *arum esculentum*, and which, when baked, pounded, and then mixed with water like dough, and allowed to ferment slightly, forms poi—the favorite food of the Islanders. The large, bright, broad leaves of this plant are refreshing to the eye, and in addition you see patches of sugar-cane, rice, coffee, clumps of banana trees, lime groves, and rows of cocoanut trees; whilst through the valley flows the bright and limpid river, turned from its course, as it approaches the town, into hundreds of small water-courses, each having its allotted task of irrigation, for without water nothing thrives on this thirsty volcanic soil. This work of irrigation is sup-

ported by the Government. You ride on and see the hills that fringe the gradually narrowing valley, covered here and there with flocks of sheep, and the tinkling bell of their leader is all that breaks the silence; again you come upon a herd of half wild cattle, who stare at you as one would suppose the natives gazed when first the white man stepped upon their shores. The valley narrows and the hills grow higher and greener, and the forest more dark and somber; here and there a bread-fruit tree, with its strangely cut leaves and ungainly trunk breaks upon the view, or the graceful tree fern rises above its neighbors, or the beautiful ceiba with its lace-like leaves; but one looks in vain for the once so abundant sandal-wood tree, gone long ago in exchange for rum, or iron, or in tribute from a conquered king to his victor. Every thing is very beautiful, and the distant roar of the ocean breaks upon the stillness without disturb ing the sense of absolute repose, for it is now noon, and beast and bird and insect life is hushed, and nothing is distinctly heard save the monotonous foot-fall of our horses, and a sound as of falling water, which gradually increases as we proceed on our way up the valley. In about eight miles from Honolulu we come upon a series of waterfalls, some of them of considerable height but of small volume, and all streaming from the tops of the mountains and forming the river, along whose banks we had for so long wound our pleasant way. We are suddenly stopped by an abrupt wall of rock—called, in the native tongue, *pali*—on every side save by which we entered, are we shut in. Two thousand sheer feet above us is the top of the precipice, on every ledge and from every cranny spring long waving plants that stretch down as though longing to take us in their tendrils; there is a constant drip from above that keeps them ever fresh, and higher up where the sun can strike they break out into glorious bunches of flowers. "Thus far shalt thou come and no further," says He who ordered the subterranean force to draw this line of volcanic wall across the island, for on the other side from that by which we approach is again a precipitous descent, shutting out a pleasant valley. The Government has, after much expense and

labor, cut a road along the top of this dyke, but it is tortuous and difficult. It completely shuts out one portion of Oahu from the other, and can be compared with the hog's back that we pass over to go to the Napa County Geysers, only on a much larger scale. Your gallop home will just give you time to go up Punch Bowl Hill and see the sun set behind the Wianee Mountains, and in the evening you will find an epitome of a California circus, which takes immensely with the Kanakas.

A RIDE ROUND THE ISLAND.

The ride round the island is harder work, being from a hundred to a hundred and twenty miles; you skirt the eastern end of the isle until you get to Waihua, passing on your way a strange salt basin apparently unconnected with, yet not rising above the level of, the ocean. It is nearly circular, and evidently volcanic, as its sides are lined with scoria; but it is bitterly salt, and in very hot dry weather the evaporation is so great that a solid crust forms on its surface sufficient to bear a considerable weight. Waihua is well watered and has some fine sugar plantations; rice also thrives well in the lower ground. After leaving Waihua the mountains come close down to the sea, and the road runs for about forty miles along the coast. At this part of Oahu the gradual rising of the shore, and consequently of the whole island, and apparent receding of the ocean, is very striking. Far inland you see where the surf formerly broke against the precipitous sides of the mountain, bringing down immense masses of rock and forming caves into which the sea rushed as though seeking to undermine the cliff by the force of its unceasing attacks.

Everybody who knows the Sandwich Islands, knows Dr. Judd, the hospitable, noble-looking man, whose interest in the group is identical with that of the king, and whose wise counsels have in every way proved beneficial to the Government. It is here in Oahu that his splendid property begins; cattle raising, wool growing, cane fields, avenues of cocoa-nuts, tamarinds, dates, and bananas all flourish, and add to the beauty and riches of this princely estate. Ad-

joining to it is the fine property of the younger Mr. Judd, which, although on the eastern side of the island and exposed to the strong winds that sometimes blow, is nevertheless well adapted to the cultivation of sugar and rice. Kaauee is the most easterly point of the island, and thence the road lies across the mountainous district Waihanea to the pali already mentioned, at the head of the Nuuana valley; the view from this point is very lovely. The island of Molakai, and, on a clear day, the heights of Maui are distinctly visible. Along the shore to the north of Honolulu is the strange bay or inland lake called Ewa. It lies about four miles from the town, and were the entrance to it artificially improved it would form a formidable rival to the present harbor, as it is very capacious and at all times its water is as calm as a mountain lake, but a heavy sea breaks over a reef at its entrance, rendering it impracticable for vessels to enter as it at present exists.

TRAVELING FACILITIES.

Horses are procurable at Honolulu, but as every proprietor has plenty of them about his plantation, an introduction to one of the planters or merchants will always keep the visitor well mounted, and if he or she makes herself or himself agreeable, an introduction to one colonist is an introduction to all; but beware, fair lady, or timid horseman, for the inhabitants ride like the very mischief, and young ladies to the manner born will jump upon a horse, without saddle, and gallop away at a break-neck pace. The graceful seat of the natives has often been described as well as depicted; they ride, as is well-known, astride the horse, male fashion, with a flowing shawl over their knees in front that not only is very becoming as it streams behind them, but the peculiar nature of the country renders such a seat on horseback better both for rider as well as animal; indeed we would recommend all lady travelers, whether they simply ride round the island, or pursue the more fatiguing trip to the top of the great volcano in the neighboring island of Hawaii, to wear the bloomer costume, and ride in the same

way as the sterner sex. At first it will be strange and painful, but in a day or two the sensation will wear off and the increased convenience will amply repay for the momentary sense of awkardness or impropriety.

THE ROYAL FAMILY.

The royal family have made Oahu their permanent residence. King Kamehameha the Fifth has his palace near Honolulu, and his great delight is sailing in his beautiful yacht and making visits to Kauai. His Majesty is fond of foreigners, and is glad of an opportunity to converse with any intelligent stranger, particularly if he brings forward any scheme for the improvement of the kingdom, either by forming companies to work unclaimed lands, or to introduce to the world the valuable woods with which the forests of the interior abound. The present king, who was known, when on a visit to San Francisco, as Prince Lot, succeeded his brother in November, 1863, and, although not so handsome as his predecessor, yet possesses the type of manly beauty and great size and strength common to the family, from Kalaniopua, King of Hawaii, to Kamehameha the the First, who united the whole archipelago under his rule. There is always that tendency to obesity as they grow old that marks all those whose strong muscular development is unaccompanied by a corresponding muscular exertion. The royal family and chiefs of the different islands have always been celebrated for their great strength, and have been known to take a full grown man across the knee and break his back; thus it was that when Kalainano seized Captain Cook he found that he was physically weak, and that he *cried out*, whereupon he concluded that he was no god and killed him with his dagger.

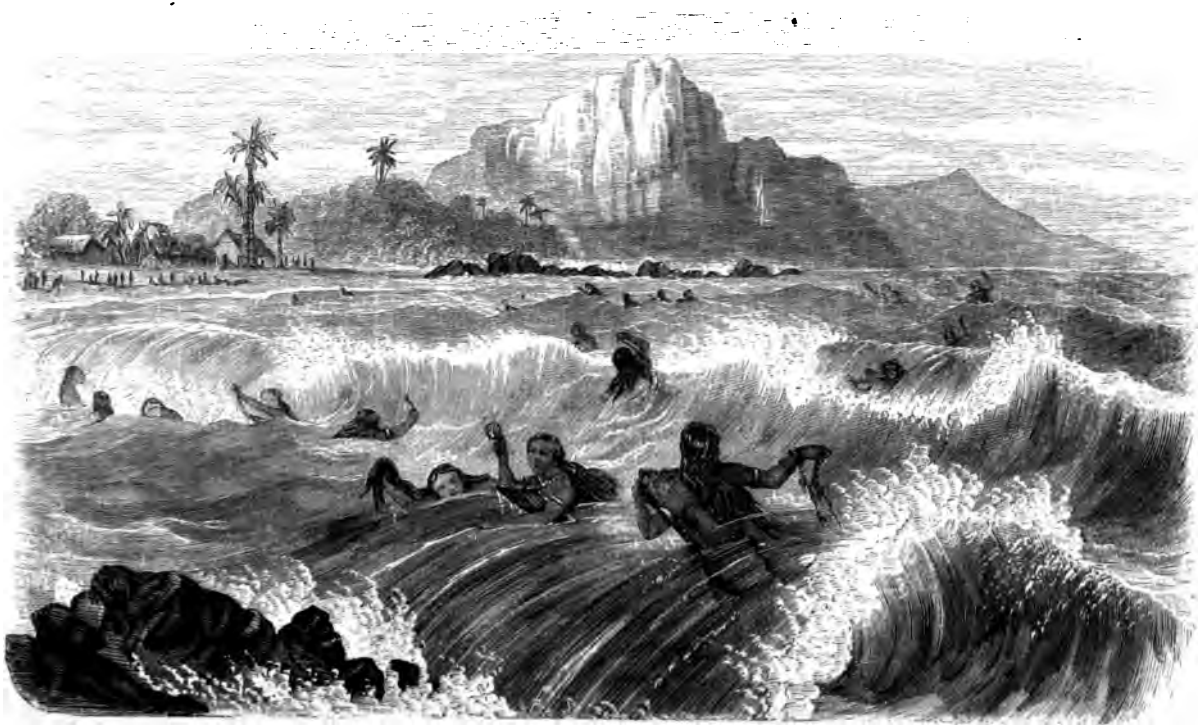
THE VARIETY OF FISH.—HOTEL ACCOMMODATIONS.

The shores and bays of Honolulu abound with fish, such as the albicore, bonita, flying-fish, baracoota, skate, eels, and a large species of prawn, similar to that dried by the Chinese; but the great delicacy among the Oahuans is the

mullet. The king has his royal preserves of this delicious fish, and as the Romans fattened their lampreys, so are these fed daily, though we hope not with the same food as the ancients used. A story is told of King Lihiliho and his queen, when they were on their ill-fated visit to England; they were taken, among other show places, to Billingsgate fish-market, where they saw some of their favorite fish; they immediately took one and ate it raw in the carriage as they went home. Hotel accommodation is not over good in Honolulu, but the climate is so exquisite that the visitor's time is chiefly passed out of doors, and the hospitality of the colonist is so great that any respectable person soon finds not only an acquaintance happy to afford information as to the neighboring objects of interest, but, likewise a host anxious to assist him in visiting them, and indeed no one visiting Honolulu stays in the town unless his journey was strictly one of business. From fifty to a hundred schooners and three steamers ply among the islands. The trade winds blow regularly, and the time of making a trip can be reckoned pretty exactly.

CLIMATE.

A description of the climate of Oahu, will mainly suffice for the whole group of islands, situate, as it is, just south of the tropic of Cancer, and nearly parallel in latitude with Mazatlan on this coast, and Canton on the coast of China. It will easily be understood how the dry heat that generally prevails in these two last-named places is, in the case of Honolulu, tempered by the northeast trades, which blow steadily for nine months in the year, and by the ocean-bred rains that these beneficent breezes bring with them. It is only at Hawaii that, on account of its lofty mountains, the trade wind is intercepted, and its want is supplied by a morning and evening sea-breeze. Nothing can be more delicious than early morning and evening in these happy islands; perchance a heavy rain has passed over the country during the night, and as you sally forth the air is fresh and laden with perfume, while the raindrops, glistening in the rising sun, tremble on the delicate



GIRLS SWIMMING IN THE SURF AT HAWAII, SANDWICH ISLANDS.

mimosa leaves of the tamarind tree, or roll slowly into the deep recesses of the palms; the dry, light soil soon drinks up all trace of the storm, and as the sun shines with gathering force, you can only note its life-giving influence in the greater glisten of the orange-leaf and the intenser purity and fragrance of its blossom. The native lies idly under the shade of the banana-tree, or indulges in the more exciting game of breasting the surf outside the coral reef, in the, to a stranger, apparently hazardous race where the combatants ride upon the breakers, with no other support than a small piece of board, and men and women join, with no other clothing than the salt water. To return to the climate. From carefully prepared meteorological tables, we learn that the average temperature of Honolulu is, at sunrise, 73 degrees Fahrenheit; from noon to two P. M., which is always the hottest time, from 78 to 79 degrees Fahrenheit; and at ten P. M., from 74 to 75 degrees; after that time, the radiation of heat sets in, and in clear weather a gentle dew falls. The average temperature at the mountainous regions of the interior, at an elevation of 4,000 feet, ranges from 48 to 64 degrees Fahrenheit. In Hawaii, where the mountains rise to 12,000 feet and upward, of course this observation does not apply; but at Kanai, the most northerly of the islands, snow and hail fall during the winter months, at an altitude of 4,000 feet; but this is on the most exposed side of the island. No snow falls on Oahu, but at Maui, only a few hours' sail off, and within sight, the temperature varies, at an elevation of 3,000 feet, from 40 to 75 degrees of Fahrenheit, on account of the dampness and consequent rapid evaporation of moisture in this locality. June and July have the highest range of temperature in these islands; but in no instance has the change of temperature in a single day been more than 15 degrees, and that difference is of rare occurrence. During the existence of the trades the temperature is very even; these winds sometimes blow with considerable force, especially along the ravines and steep defiles on the windward side, and are looked upon as healthy, on account of their carrying off the miasma and exhalations from the stagnant pools of the interior. The

islands are not in the hurricane latitude, and few thunder-storms occur.

ADVANTAGES TO INVALIDS.

No part of the world offers such inducements for the sick or valetudinarian as these Hawaiian Islands; they embrace that certain even point of temperature which is said to be conducive to longevity; its inhabitants bear out the assertion in their splendid physical devolopment, and when not worn into premature old age by debauchery, in their extreme longevity. To those frames exhausted by excessive toil in the mines, to whom winter in California gives a recess from toil without a relief from pain, we would say go and recruit your strength and get rid of your rheumatic pains, during the idle winter months, in the healing atmosphere of these semi-tropical regions; go where every indrawn breath is soothing and healing, and where the ocean waves bring health and reinvigoration as you plunge into their refreshing waters; go where the noonday heat is tempered by the spice-laden breeze as it steals through the myrtle grove, or rustles through the bamboo brake, or sweeps over the fields of sugar-cane, or quivers in the fronds of the tree fern, or casts shadows on the mountain-path as the large banana leaves wave to and fro. Go, you hypochondriac! and in the beauty of nature find calm for your despairing spirit. Go, victim of consumption, and if the disease has laid too strong a hand upon you to allow a cure, at least you will find a solace from pain and the weariness of long suffering. But above all, go ye healthy and strong ones, and climb to the top of those burning mountains; look upon the greatest active volcano in the world, at Hawaii; see, in the same island, the giant craters of those either slumbering or extinct; stand where the solitude is divided between yourself and the great sea-eagle as he sails over your head, and where your way through the dense forest is ever enlivened by the song of strange birds, or the sight of hitherto unknown plants, and trees and flowers; where the orchids lurk in the moist, warm ravines, and the parasites overtop the loftiest trees and twine themselves

from one monarch of the forest to the other, checking their growth, feeding on their sap, and finally conquering their very lives.

COMMERCIAL STATISTICS OF HONOLULU.

Nothing exemplifies more the growing importance and prosperity of the islands than the yearly increase of the exports and imports from the ports of Honolulu and Hilo, chiefly from the former of later years. The average value of the imports for the four years ending 1853, was $1,225,175, or about a million and a quarter of dollars, and the average value of foreign and domestic exports was $609,862. The imports for the year 1854 were nearly a million and a half of dollars, and the exports slightly less than the average of the four preceding years. Of the imports in 1854, $503,506 were from Atlantic ports, and $348,915 from ports belonging to the United States in the Pacific, that is from San Francisco. The exports for 1854 were as follows: Sugar, 581,777 pounds; sirup, 28,513 gallons; molasses, 41,879 gallons; salt, 5,401 barrels; coffee, 91,000 pounds; hides, 3,006; goatskins, 16,890; tallow, 15,405 pounds; arrow-root, 6,166 pounds. The imports for 1857 amounted to $1,151,422, and the exports $670,824, being a total amount of $1,822,246, of which $1,169,110 were from United States ports.

About this time a considerable trade commenced to spring up between Washington Territory and the Sandwich islands, carrying sugar, coffee, molasses, salt provisions, as well as foreign merchandise, and receiving in return lumber, shingles, shiptimber, spars, salmon, coal, &c.. to the great detriment of the Hudson Bay Company and Vancouver Isle, who had hitherto enjoyed a monopoly of that trade. Oranges also found a staple article of export to San Francisco, and in 1856 the number shipped was one hundred and seventy-five thousand.

We will now refer to the trade with the Sandwich Islands for the past year. The imports of coffee, which in 1863 had amounted to 68,085 pounds, fell off in 1864 to 14,721

pounds, arising chiefly from the increased duty on this article in the latter, and the advices of immense arrivals from Rio and Manilla, in anticipation of this increase. In molasses and sirup the imports, which in 1863 were 60,305 gallons, amounted in 1864 to 355,390 gallons. Pulu had gradually come into use in the San Francisco market, and the importations for the three last years have been from eight to nine thousand bales. The Hawaiian rice is of superior quality, and commands nearly three cents a pound higher than No. 1 China; at the close of the year Sandwich Island table rice sold for twelve cents a pound. Of sugar the imports from the Islands amounted to 7,022,922 pounds, with a marked improvement in its quality. It was favorably taken for the raw grades of grocers' sugars in 1864, and not as formerly sent to the distillery. The proximity of the Islands, the luxuriant growth of the cane, and the large yield with no tax of exchange against it, and a light insurance account, which will be less if the agency of steam navigation is employed in carrying, will enable the Islands to supply us with sugar at a lower rate than any other country, particularly when the Government schemes of labor emigration is carried out; as it is, the imports of raw sugar from Honolulu in 1864 were one-fourth of the whole imports into San Francisco for that year. The brand of James McKee is the favorite mark in the market. This name will be well remembered by his munificent donation of sugar to the Sanitary Commission. The receipts of wool for 1864 were 29,200 pounds, at an average price of 18 to 20 cents per pound. The exports to the Hawaiian Islands show a considerable increase. In 1862 they were about $300,000, in 1863, $350,000; but in 1864 they footed up $660,000, being more than the two previous years together. The arrivals from Pacific islands were, in the three previous years to 1864, about 9,500 tons a year, but in that latter year were 17,700 tons, and the departures in those three first-mentioned years about 10,000 tons a year; whereas in 1864, they were 21,000 tons. The following are the only ports of entry in the Sandwich Islands: in Oahu, Honolulu; in Maui, Lahaina; in Hawaii, Hilo, Keala-

keakua (where Captain Cook was killed), and Kawaihae; in Kauai, Waimea and Hanalei.

Honolulu is destined to be the coal depot for the steamers that will eventually run from this port to Japan and China. Situated as it is, nearly on a parallel of latitude with Canton, at a distance from it of rather more than four thousand miles, and from the Japanese Islands of about three thousand five hundred, it is geographically the only location where coal, water, fresh meats and vegetables can be procured during the trip from San Francisco to China.

Having said thus much of Honolulu and its geogrphical importance, we will now resume our description of the several islands in the Hawaiian group, the next in order being

MOLOKAI,

Which is not of great importance, being chiefly benefited by its proximity to Oahu. Its population is nearly three thousand, and its sheep pastures are good, but since 1840 there has been a great exodus of her people in consequence of the attractions of the neighboring isle. At that date the population was between five and six thousand souls. Kaluaha, at the eastern end of the island, is a lovely spot; and there are some good coffee plantations on the island. Molokai was for some time a troublesome neighbor to Oahu, but, after having rebelled twice, was finally conquered by Kamehameha the First. The second island in size and the third of importance in the group is

MAUI.

This island is of a peculiar shape, with a deep indentation near its center. On the eastern side it forms a large bay, at the center of which lies the town of Wailuka, which is beautifully situated at the foot of an extinct volcano, with one side of its crater exposed, leaving a deep perpendicular cliff covered with vegetation, and small streams trickling down its sides; it reminds one of an immense amphitheater. The small river that flows from it to the sea, has lava for its bed; and huge fragments of time-

[illegible] destructing [illegible] the pure water flows now [illegible] its destructive [illegible] the other subdivision of the island, [illegible] the largest and most perfect crater in the world. It is oblong in shape, being [illegible] and seven and three thousand feet deep. The crater [illegible] in this mountain and a large forest [illegible] its sides and fills its crater. A sugar port in this island is Lahaina, which is situated on the lee or the sea-shore. The soil is very rich and [illegible] produce is sent in droguers or [illegible] to Honolulu for shipment to this port. It is now, and was formerly still more resorted to by whaling ships; but Honolulu offers more inducements, and now the inhabitants of Lahaina find it more profitable to cultivate the sugar-cane, as they can ratoon for seven or eight years in their rich soil.

HAWAII.

We now come to the largest, and to the geologist or traveler, the most interesting of the Sandwich Islands. The first known, the land whence sprang the kings of the whole group, the ancient seat of government, having an area twice as large as the whole of the other islands together; possessing mountains whose summits overpass the line of perpetual snow, with the largest explored active volcano in the world, Hawaii may justly be entitled to pre-eminence in point of attraction, and to be alone worthy of a visit from distant shores. There is hardly one among us who has not as a child read with deep interest the history of Captain Cook's voyages, of his delight at discovering these fertile islands, of his surprise at the superior intelligence of the islanders, and of his melancholy death, mainly, as we now think, through his own imprudence and the outrageous reckless manner in which his men treated the natives. They were not only well disposed toward their visitors, but feared them as superior beings and worshiped their chief as a god; they brought them flesh, fruit, and

water, denied nothing even to their lustful requirements, and were treated with an overbearing cruelty that finally roused the spirit of their chiefs, and caused them to drive the strangers from among them. It was only when the natives discovered that the bright-eyed white man had all their humanity, with less than their physical strength, that like ancient idolaters when they found that their image was but clay, they despised in proportion as they had previously adored, and the disaster of Kealakeakua Bay was the consequence of their discovery.

Every thing about Hawaii is on a grand scale. Their chiefs were marvels of strength and manly beauty, their height was almost always more than six feet, and frequently six feet and a half. As we formerly remarked, the climate is peculiarly favorable to the development of physical vigor. There appears to have been two distinct races of men on these islands, one a smaller mongolian type. These were treated as slaves, and looked upon as inferior; the other, a mixture of Malay and Caucasian, with high forehead and fine aquiline features, the hair dark and wavy, and slight beard, bearing very erect and manly. The color of their skin was darker than of most nations so near the temperate zone, but this may have arisen from the scantiness of their clothing and constant out-door exercise. Such were the men that Cook found on Hawaii.

Exactly on the opposite side of the island from Kealakeakua Bay is the harbor and town of Hilo, and thither we will turn, as it is there that the steamer deposits us from Honolulu, and also, it is the ancient capital of the Sandwich Islands. The propeller Kilanea, called after the burning mountain, sails every ten days from Honolulu, touches at Lahaina and other places in the island of Maui, and thence proceeds to different towns all around Hawaii, finally bringing up at Hilo. This is a delightful excursion, as the owners of the boat allow the passengers to leave her, and take her up again at any point during the trip. You approach the island by the westerly side, usually making Kawaihae. As you come within sight of land, the three great mountains rise before you: Mauna Kea, the highest and most

northerly, about 14,000 feet from the sea level; Mauna Hualalai, about the middle of the island, 10,000 feet, and Mauna Lou, the most southerly of the three, 13,700 feet high. The two former mountains are extinct volcanoes; the latter is but dormant, and at times gives notice of the fires slumbering below. You can not see Kilauea, the real volcano, from this side of the island, and can hardly realize the great height of those you do, so gradually do they slope upward from the water's edge. For this reason the ascent of the mountains is practicable on horseback. The steamer puts into Kealakeakua Bay, calling, if necessary, at Kailua, and stays some time, taking in wood and water; after which it goes back again to the north, rounding Kohala Point, and skirts the shore until you make the entrance to the Bay of Hilo. The sail along the coast on a fine day is very charming, and reminds the traveler of the view along the Island of Madeira, from the Funchal to the Desertas; bold cliffs, cleft with ravines, whose precipitous sides shut in green valleys, ending in sheltered bays, where you see little white villages and the evidences of cultivation, and tiny cascades, that at the distance appear like motionless threads of light; above them all, far in the interior, you see the mists driving over the great hills, carried along by the trade winds; but you feel no air where you are, for the great volcanic wall lifts its huge barrier and screens you from the blast; the mountains attract the moisture evaporating from the Pacific, and drain the clouds of all their rain to feed their reservoirs of snow, which are ever trickling under the sun's rays into the streamlets that water the plains below.

You reach Hilo, and, having been ducked by the breakers as you are carried on shore by the stout Hawaiians, you find comfortable quarters, and start to find horses and guides, or to form a party to visit the volcano. But before you start, look at the lovely view from the harbor of the town. It is the green side of the island, and from the top of the mountains in the distance to the plains at their feet, all is a succession of evergreen forests of vast extent, and abounding with large and valuable timber, succeeded

by fertile plains, where the sugar-cane grows well, and is being abundantly cultivated. On the shore you see the inhabitants fishing or bathing, or enjoying themselves by being borne at a thundering pace on the top of the surf, darting away from the beach as they appear about to be dashed upon it.

The next day we suppose you start for the Kilauea. The first part of your journey is over, the savannahs, already spoken of, where you see the natives cultivating what they call the *upland taro*, which, however, is not so good nor reliable as the *lowland taro*, grown where there is abundance of water. You then enter upon the forest and district of tree ferns, and emerge upon a wilder scene, as you approach the first crater, which is about four or five thousand feet above the level of Hilo. Here you will find your road composed of gravel, lava and scoria, and very difficult to travel upon, from the soft and broken nature of the ground; you are, however, soon rewarded, for you approach, by a gradual ascent, the wall of the crater. There is a house near the brink, where you can stop and refresh yourself prior to the descent of the crater. The best point of departure for the descent is near this grass house, where you leave your horse. You then go for about five hundred yards, and stand on the brink of the great caldron, for, unless during great eruptions, this is the nearest descriptive approach to the mass of molten, burning, seething, fretting, bubbling, glowing matter that is spread before you. You walk carefully, and with fearful steps, across this agitated mass, that threatens to burst forth into violence as you tread; you pass by miniature volcanoes, where you can study the nature of the great overflow; here you see jets of steam escaping, and there a semi-fluid, semi-opaque lava, slowly bubbling, as though resisting the plutonic force; presently you are startled with a sound like a cannon, and see a puff of vapor rising like an inverted cone. At last you come to the great rent of 1859, where you see the subterranean fires, not bright, but of a dull, heavy red color, as though the burning matter were too ponderous to burn brightly, and not sufficiently igneous to be incandescent; it

is more in the nature of a vitreous matter, caused by the agency of intense subterranean fire, than of any thing burning by itself, or by force of its own combustive nature. Now and then it labors as though in the throes of rebellious convulsion; at such times the heaving mass of dull liquid fire rises up to the edge of the great chasm, and then sinks sullenly down, as if exhausted by the strife with the greater power below.

But though reluctant to burn, and not feeding its own fires, woe to the substance, however apparently durable, that comes within its reach; woe to the land when by a supernatural effort, it passes the brink of the calcined precipice that forms its natural prison. Such happened in the last great overflow; first, there were repeated shocks of earthquakes, then a shower of stones was cast hundreds of feet into the air; at length the molten mass lazily rolled over one side of the crater, and wearing itself a gap by the force of its continuous stream, gradually increased in volume, and set forth in its work of desolation, to the sea. The great hard forest woods yielded like tinder; the great Koa, which turns the edge of the woodman's ax, disappeared as if by magic; the Ohias shrank and shriveled at the mere breath of the advancing stream. At length the stream of lava came to the banks of a river which was winding its peaceful way to fertilize the plains, ere it gave its tribute to the ocean; the river was deep, and its flow of water unceasing. For three days did the lava stream do battle with the snow-fed river; for three days a column of steam and sulphurous smoke was borne upon the wind to the fearful inhabitants of the plain; at the third day, the accumulation of obstructed lava became so great that a truce to the warfare was completed; the melted stream flowed over the mass hardened by the action of the water, and the river, exulting in its victory, flowed under a natural bridge, in a stream of boiling water. A mile and a half below this phenomenon, a canoe upset and an unfortunate native was literally boiled alive. The lava stream at length reached the sea; its volume lessened by cooling and being deposited in its course; but the fiery track remains

to this day, and the shuddering aboriginal tells you of the wrath of the goddess Pele, as evinced by the blasting track of vengeance. The track of this eruption is about seven miles from Hilo, toward the south. The ascent of the great mountains is made more easily from Kailua, on the other side of the island. It can easily be made on horseback, but the natives do not like to face the snow. The only wild animals are wild cattle, which are numerous in the highlands. The natives go out in parties to lasso them for food; they are generally called royal property, but that does not prevent poaching

The great beauty of Hawaii is the natural, quiet, lawn-like character of its low lands contrasted with the fierce antagonistic nature of its high lands; and this calm of the former would appear to have exercised its influence over its native inhabitants—simple in their habits, confiding in their dispositions, indolent from the very profuseness of their prolific isle—their only active exercise being either in or on their much-loved waters, they indeed realize the wish of the poet—

"Of hearts which languish for some sunny isle
Where summer years and summer women smile,
Who, half uncivilized, prefer the cave
Of some soft savage, to the uncertain wave;
The gushing fruits that nature gave untilled;
The wood without a path, but where they willed;
The field o'er which, promiscuous plenty poured
Her horn—the equal land without a lord;
The earth, whose mine was on its face untold;
The glowing sun and produce all its gold;
The freedom which can call each grot a home;
The general garden where all steps may roam.
Where nature owns a nation as her child,
Exulting in the enjoyment of the wild.
Their shells, their fruits, the only wealth they knew;
Their unexploring navy, the canoe;
Their sport, the dashing breakers and the chase;
Their strangest sight, a European face.

Such was the country, and such is the country still. The

kindly greeting, the "Aloha," is for every stranger who does not insult them. They rejoice when he admires their much-loved island; they long to show him the

> "Quiet nooks where contemplation dwells;
> Where silence, undisturbed, may reign alone,
> So bright, so calm, so still."

S. F. News Letter, Dec., 1865.

EARLY CALIFORNIA CITIES.

ARLY in the year 1850, Dr. Robert Semple commenced building a steamboat at Benicia, to run from Sacramento to Colusa. Most of the timbers were gotten out in Contra Costa County, and the sawed lumber used was Oregon pine. At that time, no one engine could be procured in the State of sufficient power to propel the boat, and no two of the same capacity were to be had. The project was undertaken of making two different kinds of engines, of different power and stroke, work in the same boat. She was made ready for trial about the last of June, but she was not a success. She made one trip, was taken to San Francisco, the engines taken out, and the hull, which cost over $30,000, was eaten up by the worms. It was, we believe, on the second day of July that this steamer—christened Colusa—left Benicia, headed for the contemplated city of Colusa. The writer of this, then in his eighteenth year, was on board. We spent the Fourth of July in Sacramento, and on the morning of the fifth left for this place. Fremont and Vernon were both "cities" then; and there were many other cities on the Upper Sacramento, but no houses. The Colusa was the first steamboat that had attempted to ascend the Sacramento in low water. Le petit steamer "Jack Hays" had made a trip to about as far as where Red Bluff now stands, during the winter. There was a city there then, and it had a romantic name which

we have now forgotten. But it is all in ruins now, and not a trace of it is left. There had been two or three other little boats up the river, to the different cities, during the winter, but we encountered first the snags of the Sacramento. Colonel Semple had been up the river during the high water of the spring of '50, and located the city of Colusa at a point about seven miles above here. That was our destination. But it took the boat some seven days, with the assistance of innumerable Indians, to reach there. At Mead's we got on a sand-bar, and in backing around we broke the "gearing" of one of the engines, and then the boat had to make the balance of the way up, and all her return trip, with one wheel.

Getting tired of so slow a process, and being desirous of seeing the city that was to be so famous, we landed on the east side of the river, and getting an Indian for a guide, we struck out on foot for the city. The Indians then always traveled in a kind of dog-trot, and as soon as we landed, our guide struck it up. We followed in silence for about a quarter of a mile, our guide keeping about twenty or thirty paces in advance of us. We hallooed at him to hold up, but he thought we wanted him to go faster, and he was equal to the task. We were obliged to keep up, for it was the wildest country we had ever seen. Through thick timber and the undergrowth of pea-vine, wild oats, brush, and every imaginable thing, we went, so thick that we wondered that the Indians had ever been able to make a path through it. But we had no time either for observation or reflection. On and on through that dense wood our guide "trotted." We have a distaste for a "trot" until now. We thought we had trotted over ten miles—and have seen since that it was about four—when our guide stopped. He was opposite the "city," but there was no path into it. He made signs that we would have to break through the thicket. He was entirely naked, but he took the lead, tearing through brush and briar at a rate perfectly astonishing, but he could not trot—we had him there. We could follow as fast as he could break the road. It was about a half mile from the path to the river, and, although he had

no clothes whatever, and took the lead, we were scratched four times as much as he. The city afforded no ferry, and our only alternative was to swim. The Indian proposed, by signs, to carry our clothes across on his head; we accepted the offer, and, for the first time, we swam the Sacramento. Immediately on our arrival we took the census of the city, and found the inhabitants to number 000,001. Robert Parkhill, formerly of Florida, was the principal man of the place, and to him we introduced ourself. He fried us a slice of pork and a slapjack, and, after our trot, we relished it hugely.

In the course of a few days the boat arrived, discharged her cargo, and left. Parkhill left; but the city had greatly increased in population. The census now stood 000,003. The principal men of the place were:—C. D. Semple, proprietor of the city and merchant; William S. Green, junior partner, and E. Hicks, "master builder." After consultation, it was determined to move the whole city to "Salmon Bend." Acting upon this, a wagon and a yoke of cattle were purchased. The lumber was first put aboard, and the colonel and the carpenter left. Having a large stock of goods lying around under the trees, we had to remain. The colonel and Charley, an Indian boy of royal blood, were about three weeks in completing the house. We had one set of camping utensils, and we had to divide them. We had to bake bread and fry pork in a tin plate, yet we kept a very extensive hotel. People were all the time asking for meals, and did not think of grumbling at one dollar for a biscuit that would serve for a cannon ball, and a slice of rusty, fat pork.

When the goods were hauled we came down, and the feat of moving the city was accomplished.—*Cor. Colusa Sun.*

A MODEL REPORT.

THE subjoined report by Professor Ausgespielt, "M. E.," speaks for itself, and will be read with lively interest. Indeed, apart from its scientific "outcroppings," its brevity will commend it:—"In accordance with your request per telegraph, I have made a scientific examination of the Nemos Company's ledges, and herewith send you such facts as I have collected, together with a brief statement of my peculiar theory regarding the geological and mineralogical features of your very remarkable mines. In passing, I can not omit to express my regret that, in their present undeveloped state, I am not able to send you more details. The course of the Elephant—the principal ledge of the group—is N. 20 E. S. E., by W. 125 N. The ledge is sixty feet wide, and crops out boldly for fifteen feet; and, in my judgment, it would crop out a great deal more but for the fact that its geology presents an astounding idiosyncracy, viz., the primary formation having united igneously with the porphyritic sandstone of the alluvial period, caused a conglomerate deposit of the bichloride of tellurium, thus completely upsetting the glacier theory, and throwing us back on the patio process.

Having thus satisfactorily and scientifically accounted for the condition of the croppings, which, from the simplicity of my theory, you will readily understand, I will now proceed to a particular description of the incline. The dimensions of the incline are nine feet high by four feet wide, and is at present eight hundred and forty-two feet deep. At this depth the ledge is far richer in silver than near the surface, as we can find ore, not selected, but taken promiscuously, that will assay from $3 to $7.75 per ton in silver. As a general course, the ledge dips at an angle of 98° from the perpendicular, thus affording good facilities for getting out the ore. The wall rock is composed of inferior oolite meerschaum of the lower silurian, and is very porous, and with traverse cleavage, and anhydrous

sulphate of limestone—which, by the way are excellent indications of permanence. The country rock is *sui generis*, and is almost wholly composed of metamorphic polyglot, badly intermixed with jaspery quartz. A level has been run at a distance of one hundred feet from the mouth of the incline, from which about eight thousand tons have been extracted; and as the cost of extracting was only about $15 per ton, the rock can be used for building roads, or for any other purpose the company may deem proper. I would suggest, however, that it might be more profitable to leave it where it is. Hoping that this report will prove entirely satisfactory, it is respectfully submitted.—*Reese River Reveille.*

SKETCH OF MEADOW LAKE.

NTIL a very recent period, this romantic spot in Nevada County, about forty miles east of Nevada City, was almost wholly unknown to the public of California. Travelers over the Henness Pass and Donner Lake routes returned to their homes in the lowlands, and described in glowing language the wild and picturesque scenery which skirts those highways as they approach the summits of the Sierra. Now and then, an adventurous tourist, who had wandered from the great thoroughfares of travel, among the solitudes of the mountains, published a sketch from his note-book, descriptive of a somber forest, through whose shadowy glades reigned an awful silence, a crystal stream whose banks were fringed with the loveliest of flowers, or some magnificent sheet of water, in whose clear waves he had seen reflected the fleeting clouds of a summer sky, or the starry firmament of night. Yet a large majority even of the reading community had no very definite idea of the climate, scenery, or resources of the mountainous region included in the boundaries of the present township of Meadow Lake. In their minds it was associated with the vision of a dreary winter, extending over nine months of the year, and a rocky,

inaccessible wilderness, closed to the approaches of society by impenetrable barriers of snow and ice. The remembrance of the ill-fated Donner party cast a shade of deeper gloom over the picture which imagination had drawn.

Still Excelsior did not remain entirely unexplored. The demand for water wherewith to work the auriferous claims scattered through the valleys and foot-hills of Nevada and Sierra counties, had at an early period attracted the attention of capitalists to these snow-crowned and exalted regions. Here, it was evident, might be obtained at the proper elevations, an inexhaustible supply of the coveted element, which could be collected in reservoirs, and conducted by aqueducts to less favored localities. Action speedily followed the conception, and in the summer of 1858, the first permanent structure was erected in the district by the South Yuba Canal Company. It consisted of a stone wall projected across a ravine, the banks of which were some 300 yards apart. This wall forms the dam of a reservoir, or artificial lake, from which Nevada City, and a large section of country in the southwestern part of Nevada County, obtain, in the summer and fall months, their principal supply of water. It measures in some places fifty feet in height; is, at the apex, fifteen feet wide, and is built of solid granite, without a particle of wood or cement entering into its composition.

The sheet of water, thus collected and discharged by a small gate at the dam, is called Meadow Lake, and lies within the corporate limits of the town designated by the same name. The reservoir, or lake, is about two miles long from north to south, and between three hundred yards and three-fourths of a mile wide, with a depth, in places, ranging with the season, of from ten to thirty fathoms. Other enterprises of a similar character followed, and they have undoubtedly proved of incalculable benefit to several cities, and a multitude of miners and agriculturists in Sierra and Nevada counties.

No discovery, and not even a suspicion of the existence of mineral treasures followed the labors of the first explorers of the district. They passed over ledges, since proven to be exceedingly rich, without a dream of the wealth be-

neath their feet. A fact, at first view so remarkable, can only be accounted for by the peculiar appearance of the country, differing in almost every respect from what is presented in any other portion of California.

Sometime in 1860, Henry Hartley wandered to these mountain solitudes. He came partly, as the writer has been informed, with a view to the improvement of his health, threatened somewhat with consumptive tendencies, and partly to trap the wild game of the mountains, when the deep snows of winter should have fallen. No idea of gold-hunting seems to have occurred to the hardy trapper as he plunged into solitudes more dreary and desolate than the lonely island of Selkirk. The long winters of the mountains were his choice seasons. Then it was, when not imprisoned in his cabin by the fury of the storm, the adventurer glided with his snow-shoes over the frozen expanse which surrounded him. In the spring the trapper resorted with the rewards of the chase, to the lowlands, lingered there during the summers, and returned with his supplies when the snows first announced the approach of winter. Thus passed three years of his sojourn in the wilderness, when in June of 1863, Hartley first observed, with some surprise, a number of ledges about half a mile distant, in a southeasterly direction, from the site of the present town of Meadow Lake. In August of the same year, Hartley, accompanied by John Simons and Henry Fentel, to whom he had communicated the news of his discovery, visited the newly found ledges, and in September made the first locations in Meadow Lake, then called "Excelsior"—and forming a part of Washington township.

Spring, as it is seen in other portions of California, is unknown in these high altitudes. The transition from winter to summer is almost immediate. As the period for the inevitable change draws near, it would seem that the storm-king, throned in the frozen recesses of the mountains, becoming conscious that his tempestuous reign must soon dissolve, under the genial sunshine of summer, exerts all his remaining strength, and makes a last determined effort to retain his dominion over nature.

The months of March, April, and May, 1866, will long be remembered in the mountains for their unprecedented severity. All marks of the narrow trails which traverse the summit were obliterated by the drifting snows, and even the highways, in many places, were rendered difficult of passage. As an illustration of the character of the season, it may be mentioned, that from the 20th of May until the first day of June, there was almost constantly a snow-storm in and around Meadow Lake. The summer opens with a strange aspect in this mountainous region. Instead of fragrant flowers, murmuring streams, the hum of bees, and carol of birds, so familiar to the denizen of the plains on the approach of the summer months, here may be seen mountains capped with snow, streams held fast by frozen chains, and icicles pendent from the branches of the giant pines, whose lofty heads tower grandly among the clouds of the Sierra.

The first storm of the winter of 1866–67, commenced on the morning of the third of November; it was ushered in with the usual gales from the southwest, and on their wings came the lowering clouds of winter, frowning darkly, as they gathered around the mountain-tops. Rain and snow came down in heavy showers during the day; by night the former element had disappeared, and the snow-flakes descended with noiseless fall upon forest, hill, and glen. At sunrise on the fourth, the face of nature was covered with a veil of spotless white. No one, unless he has been an eye-witness of the scene, can appreciate, from description, the wondrous change which a few hours of a winter's storm will effect in the appearance of a mountain landscape. At eve the sun sinks in purple splendor beneath the horizon; no sign in the heavens indicates to the inexperienced observer the coming storm. The old mountaineer, however, reads nature with a different power of perception, and readily discerns the portents of the tempest. He sees them in the light clouds which hover in the western sky; he hears them in the southwest wind's melancholy sighing through the forests. The last glance at sunset takes in the evergreen pines, the stream dancing along its narrow channel, and dashing

its spray over the grim old rocks which stand in its wayward course—the lakes whose crystal waves reflect the golden hues of departing day; the next morn the scene is changed. The icy hand of winter has been laid on the landscape, and the beholder, dazzled and astonished, finds scarcely a trace of the loveliness which enchanted his senses the previous evening. The stillness and repose of death now reign, where only a few hours before all was life and animation. The mountain-tops are shrouded in robes of white; the tall pines, with their snowy wreaths and pendent icicles, wear a strange and spectral appearance; the babbling brook is frozen into silence, and the lake lies cold and motionless, its polished surface gleaming like burnished steel in the light of day. The scene is no longer beautiful—it has become sublime.

The writer feels that he can not, in justice to the subject which he has ventured to present to the public, conclude this description without an allusion, at least, to the magnificent scenery and glorious summer and autumn climate of Excelsior. He has, in times past, been a dweller in the mountains, far removed from the luxurious ease of the cities, and subject to all the privations of life in the wilderness. He finds an ample compensation for any sacrifice of social enjoyment, in the wondrous pictures which memory will retain of Excelsior to the last syllable of recorded life.

Some ten miles distant from the line of railroad travel, and in the immediate vicinity of the beautiful lake of the meadow, the visitor can find a scene of loveliness and sublimity not surpassed on the habitable globe. Let him, on some dewy morn, climb to the top of "Old Man Mountain," or the heights which to the westward, overlook the pleasant village of Meadow Lake. From those rocky battlements the soul expands as it contemplates the beauty and grandeur of nature. Look well, for the picture which spreads before you has been drawn by the hand of an Almighty Artist. In one direction repose a cluster of lakes, whose clear waves mirror the fleeting clouds of day. Their shores, rising into gentle hills, are crowned with stately forests, and decked with flowers as fair as the dews of earth

ever nourished. Down the mountain sides roll in silvery threads a thousand tiny streams, finding rest in the bosom of some placid lake, or mingling with the sparkling waters of the rapid rolling Yuba. Glancing in another course, at the base of Old Man Mountain, the dazzled eye beholds a landscape of a sterner character. Huge bowlders of everlasting granite, trees standing apart and in solitary majesty, and frightful, yawning chasms make up a picture, wild, weird, and desolate, but grandly sublime. The writer has looked upon the scene at all hours of the day, and at all seasons of the year, and never yet without a feeling of solemn awe pervading his whole being. Perhaps the most appropriate time to view the landscape is when the storm is raging, and the darkness of twilight has cast a somber mantle over the face of nature. At fitful intervals, when the lightning's glare illumes the scene, and the harsh thunder rolls along the granite peaks, one catches for a moment an inspiration which tempts him to exclaim :—

"The sky is changed : and such a change ! O night,
And storm and darkness, ye are wondrous strong—
Yet lovely in your strength, as is the light
Of a dark eye in woman."

The beauty of the scenery is not the only, nor perhaps the chief, attraction of Excelsior. The delightful summer and fall climate of the district has excited the admiration of all who have visited it during these seasons. In August and September, when the heat of the plains is sultry and oppressive, the temperature of the summit is most refreshing. The physical character of the country contributes to this result. The altitude of the district, placed between seven and eight thousand feet above the level of the ocean, secures it alike against the assaults of pestilence, or the miasmatic vapor of the lowlands. On the other hand, its numerous lakes, rippling streams, and dense forests, not only afford pleasing contrasts to the eye, but diffuse an agreeable moisture through the atmosphere, and thus take from it that rareness so generally prevalent in

mountainous regions. To the invalid in search of vigorous health: to the tourist, longing to sojourn awhile amid scenes of unsurpassed grandeur: to the weary dweller in the city, or on the plains, who would exchange, for a brief season, the conventional restraints of society for the free life of the mountains, Excelsior offers inducements to a visit beyond any spot in California.

HON. FRANK TILFORD.

A VALUABLE TABLE.

ARREL MEASURE—Cider and other liquids, 30 gallons. Rice, 600 pounds. Flour, 196 lbs. Powder, 25 lbs.

Bushel Measure—Wheat, beans, potatoes and clover seeds, 60 lbs. Corn, rye, flax-seed and onions, 56 lbs. Corn on the cob, 70 lbs. Buckwheat, 52 lbs. Barley, 48 lbs. Hemp seed, 44 lbs. Timothy seed, 45 lbs. Castor beans, 46 lbs. Oats, 35 lbs. Bran, 20 lbs. Blue-grass seed, 14 lbs. Salt, 85 lbs. Dried apples, 24 lbs. Dried peaches, 33 lbs.

A hoop, 18½ inches diameter, 8 inches deep, holds a Winchester bushel. A box 12 inches square, 7 and 7 1-32 deep, will hold half a bushel.

A Gallon Measure—An English Imperial gallon is 10 lbs. of distilled water at 62 degrees Fahrenheit, when the barometer stands at 30 degrees.

Land Measure—An English Imperial acre is 4,840 square yards, or 160 square rods. A square of 13 rods upon each side is commonly counted an acre; it is 9 rods over measure. A square 22 yards upon each side is one-tenth of an acre.

English acre, 4,840 square yards; Scotch, 6,150; Irish, 7,840; Hamburg, 11,545; Amsterdam, 9,722; Dantzic, 6,650; France (hectare), 11,960; Prussia (morgen), 3,053.

Government Land Measure—A township, 36 sections, each a mile square.

A section, 640 acres.

A quarter section, half a mile long, north and south, and a quarter of a mile wide, 80 acres.

A sixteenth section, a quarter of a mile square, 40 acres.

The sections are all numbered one to thirty-six, commencing at the northeast corner.

The sections are divided in quarters, which are named by the cardinal points. The quarters are all divided in the same way. The description of a forty-acre lot would read: The south half of the west half of the southwest quarter section 1, in township 24, north of range 7 west, or as the case might be.

Mile Measure—A standard English mile, which is the measure that we use, is 5,280 feet in length, 1,760 yards, or 320 rods. A strip one rod wide, and one mile long, is two acres. By this it is easy to calculate how much land is taken up by roads, and also how much is wasted by fences.

A "Sabbath-day's journey," 1,152 yards, 18 yards less than two-thirds of a mile.

A day's journey, 33⅓ miles.

A reed, 10 feet, 11½ inches.

A palm, 3 inches.

A fathom, 6 feet.

A reek foot is 12½ inches.

A Hebrew foot is 1-212 of an English foot.

A cubit is 2 feet.

A great cubit is 11 feet.

An Egyptian cubit is 21,888.

A span is 10,944.

Board Measure—Boards are sold by superficial measure, at so much per foot, of one inch or less in thickness, adding one-fourth to the price of each quarter inch in thickness over an inch.

Grain Measures in Bulk—Multiply the width and length of the pile together, and that product by the height, and divide by 5,150, and you have the contents in bushels.

A Ton Weight—In San Francisco, a ton is 2,000 pounds. In most places, a ton of hay, &c., is 2,240 pounds.

A ton of round timber is 40 cubic feet; of square timber, 54 cubic feet.

"A quarter" of corn or other grain sold by the bushel is eight imperial bushels, or a quarter of a ton.

A ton of liquid measure is 252 gallons.

A firkin of butter is 56 pounds; a tub of butter is 84 pounds.

A bale of cotton in Egypt is 90 lbs. In America, a commercial bale is 400 lbs., though cut up to vary from 280 to 420, in different localities.

A bale or bag of Sea Island cotton is 300 lbs.

Wool—In England, wool is sold by the sack or boll of 22 stone; which, at 14 lbs. to the stone, is 308 lbs.

A pack of wool is 17 stone 2 lbs., which is rated as a pack load for a horse. It is 240 lbs. A tod of wool is 3 stone 14 lbs. A wey of wool is 6½ tods. Two weys a sack. A clove of wool is half a stone.

The Stone weight is 14 lbs. when weighing wool, feathers, hay, &c., but a stone of beef, fish, butter, cheese, is only 8 lbs.

A Last is an English measure of various articles.

A last of soap, ashes, herrings, and some similar things, is 12 barrels.

A last of corn is 12 quarters.

A last of gunpowder is 24 barrels.

A last of flax or feathers is 1,700 lbs.

A last of wool is 12 sacks.

Coal—A chaldron of coal is 58⅔ cubic feet, or by measure, 36 heaped bushels. A heaped bushel of anthracite coal weighs 80 lbs., making 2,880 lbs. to the chaldron.

Wood—A cord of wood is 128 solid feet in this country and England. In France, it is 576 feet. We cord wood 4 feet long, in piles of 4 feet by 8.

In New Orleans, wood is retailed by the pound, and to a limited extent in New York. It is also sold by the barrel. A load of wood in New York is 42⅔ cubic feet, or one-third of a cord.

Wood is sold in England by the stack, skid, quintal, billet, and bundle.

A stack is 108 solid feet, and usually is piled 12 feet long, 3 feet high, and 3 feet wide.

A quintal of wood is 100 lbs.

A skid is a round bundle of sticks, 4 feet long. A one-notch skid, 23 inches. A three-notch skid, 28 inches. A four-notch skid, 33 inches. A five-notch skid, 38 inches.

THE AMOUNT OF SILVER IN USE AMONG MEN.

As silver constitutes, with gold, the great medium of commercial exchange over all the world, and as in olden times it was the only medium, and is so still among the nations of Eastern Asia, the following historical reminiscences and estimates as to the value of the silver now in the possession of men may be of interest.

The first notice of silver we find in the Bible mentions that Abraham received "pieces" of silver, and weighed out "shekels" of it, which were current money among the merchants. It appears, however, that regular silver coin was only made about nine hundred years before our era by the Æginetans (see the Parian chronicle). A Babylonian inscription, found by Rawlinson, states that the city of Damascus, after its conquest by Phuluk, had to pay a tribute of 2,300 talents of silver. Plinius states that Cyrus collected from his Asiatic victories an amount of silver which, reduced to our standard of the gold dollar, would equal $40,000,000,000. The statement is almost incredible, as will appear from the following calculations about the real amount of silver in different hands, founded on reliable evidence:—

Herodotus states that the nations subdued by the Persians paid a yearly tribute of silver equal to $15,000,000: they paid this, say, ten years,	$150,000,000
Carthage paid to Rome, after the second Punic War, $180,000 for fifty years,	9,000,000
Spain paid to Rome $2,240,000 for twelve years,	27,000,000

Silver was, in consequence, so abundant in Rome, that Caligula loaded 125,000 pounds on armor and weapons used in the circus, worth, at the present rates, - - $2,500,000

It appears from Plinius that the silver mines of Spain were worked already 2,000 years ago to the distance of one and a half miles from the surface, and Polybius states that the Carthaginians had 40,000 men engaged there in that business; the amount they took out is estimated at - - - - 100,000,000

The Moors continued this mining very successfully, and took out an amount estimated at - - - - - 55,000,000

After the Moors, the mines were deserted until reopened, in 1571, by the Fugger family (German), who extracted, from 1571 to 1607, - - - - - 15,000,000

Again the mines were idle till 1825, since which time English companies have taken out about - - - - - 30,000,000

In Germany, silver mining was commenced about the year 700; in Bohemia and the Hartz in 1000; in Tyrol and Saxony in 1200; in England, France, Hungary, and Norway in 1400. The total amount produced by all these countries is estimated at 200,000,000

But all this was put in the shade when, after the discovery of America, silver was found in Mexico and South America, where it had been mined by the natives for an unknown period of time, but in so imperfect and primitive a manner that the treasures found by Europeans has far surpassed those in the hands of the natives, large as they were. For instance, two beams of silver were found by Pizarro, near Cuzco, twenty feet long, one foot wide, three inches thick; consequently, containing ten

cubic feet, weighing 9,000 pounds, and worth - - - - - -	$180,000
The ornaments of temples stolen by the Spaniards amounted to 26,000 pounds, -	520,000
All the Mexican silver was used in ornamenting temples, &c., not as coin or circulating medium.	
Compare, now, this amount with the results obtained by civilized mining:—	
Amount of silver smelted at the Pasco works from 1784 to 1827—5,000,000 pounds troy,	100,000,000
Yearly yield of three mines for thirty years after 1827, $2,000,000 per year, - -	60,000,000
The mines of Great Potosi, from its discovery in 1545 until 1556, $10,000,000 per year, -	110,000,000
The same mines, from that time till 1778, -	1,000,000,000
For the last ninety years, $1,000,000 per year,	90,000,000
The mines of Peru and Bolivia, from their discovery till 1845, - - - - -	2,500,000,000
The mines of Chili, worked by English companies, from 1836 to 1853, - - -	34,000,000
Mines of Mexico, according to Humboldt, from 1550 to 1700, $2,500,000 per year, -	375,000,000
During the eighteenth century, $23,000,000 per year, - - - - - -	2,300,000,000
In the first half of the nineteenth century, $10,000,000 per year, - - - -	500,000,000
During the last fifteen years, $25,000,000 per year, - - - - - - -	375,000,000
All these numbers make a grand total of -	$8,030,700,000

It is not likely that the nations of Asia mined as much silver as this amount; the probabilities are that the total amount possessed by them before the introduction of western silver did not exceed $1,000,000,000, which would swell the amount to $9,030,700,000; and making a further allowance for amounts not accounted for of some $300,000,000, the whole amount of silver in possession of man in this country would be less than $10,000,000,000; only one

quarter of the amount which Plinius states that Cyrus collected more than two thousand years ago.

In closing this article, we can not omit mentioning one fact which strikes us as a curiosity, that all this existing silver is inadequate to pay the debts of the governments of two or three great modern nations.

P. H. VAN DER WEYDE, M. D.

In American Journal of Mining, N. Y., January 25, 1868.

ADDRESS BY NEWTON BOOTH, AT THE OPENING OF THE MECHANICS' INDUSTRIAL FAIR, AT SAN FRANCISCO, AUGUST 8, 1868.

WHATEVER virtues may rightly be ascribed to this nineteenth century in which we live, humility is not one of them. It is a philanthropic age. Never before were there so many benevolent organizations, never were the helpless, the blind, the insane, so tenderly cared for. It is a heroic century—its sixty-eight years have been full of that heroism that does not "set life at a pin's fee." It is a democratic age. Never have the people been of so much account, and seldom has genius been so rare. It is pre-eminently an age of mechanical invention. It makes steam bear its burdens, lightning carry its messages, the sun paint its pictures. But it is not a modest age. It does not lack self-confidence or self-praise. It is brimful and running over with egotism. It regards, with self-complacent pity, the centuries gone before that did not have steamboats, railroads, and telegraphs, sewing-machines, cooking-stoves, lucifer matches, steel pens, cylinder presses, power-looms, cotton-gins, gang-plows, reapers, thrashers, apple-parers, turning-lathes, nitro-glycerine, giant powder, columbiads, needle-guns, Colt's revolvers, steam-paddies, track-layers, baby-jumpers, chloroform, photographs, and coal oil. It looks with a kind of commiseration on the ages to come, when the world will have to keep on using old tools, as human ingenuity and nature will be

alike exhausted, and there will be no new forms to invent, no new forces to discover. If it experiences a momentary chagrin because it has not achieved the perpetual motion, nor successfully an Avitor, it is consoled with the reflection that it has not accomplished the first, because it is impossible, and that it will, the second, because it is possible. In short, whoever has not managed to be born in the nineteenth century has been very unfortunate, or has made a great mistake.

Standing in this temple of art, this armory of labor filled with the implements with which toil carries on its warfare with want, and beautiful with the evidence of its triumphs, we may at least claim, with becoming modesty, that the world is now fast learning how it can most easily get its daily bread—how labor can be made most productive, for the supply of physical wants. Two other questions behind that—how the burdens and rewards of labor shall be equitably distributed, and how the time not needed for the supply of physical wants shall be so employed that the age may be clothed with an intellectual and spiritual glory equal to its material wealth and power, it has scarcely begun to solve—questions that may not be rightly solved until a civilization shall arise as superior to ours as ours is to barbarism, in a future as distant from us as we are from the creation of man.

The problem of daily bread, however, is neither easy nor unimportant. If men depended upon nature alone for food, upon game, fish and wild fruits, the country would be crowded where population averaged one to five square miles. The trapper was right, if he would remain a trapper in moving farther west, because the settlement was getting too thick for elbow-room when his neighbor built his cabin only ten miles away.

Consider what the world consumes every year. 200,000,000 pounds of flour, and 13,000,000 pounds of meat go down the throat of New York City yearly. Multiply by 1,000,000, and if you can conceive the result, you will have some idea of what it takes to feed the world with bare necessities. California consumes annually, 365,000 barrels

of flour, 700,000 bushels of potatoes, 70,000,000 pounds of meat, 1,000 tons of codfish, 38,000,000 pounds of sugar, 5,000,000 pounds of coffee, 1,500,000 pounds of tea, 5,000,000 pounds of butter, 20,000,000 pounds of rice; wears out $15,000,000 worth of dry-goods and shoe-leather, and burns up, beside houses and mountain towns, 250,000 tons of coal, 4,000,000 pounds of powder, 4,000,000 of candles, 1,000,000 gallons of coal-oil, and 50,000,000 of cigars; not to mention the 1,500,000 gallons of whisky that annually assist to consume us. If all this had to be raised, mined and manufactured, or paid for by the labor of our hands, unassisted by art, we would have few holidays, and no pageants like this. If the world had to be housed, fed and clothed with only such crude tools as actual necessity would suggest, the many would be slaves to the few, and worn out in their service, or all would be the slaves of toil. There could be no accumulations, nothing laid up against a bad season or a rainy day, and the wolf would be continually at the door. Then whoever would succeed in pointing a stick with iron to scratch the ground, at seed-time, and whoever would teach a dog to guard the sheep while the shepherd slept, would be benefactors of the race. The man who would discover that salt would preserve meat, would deserve a patent of nobility; he who would tame a horse and make him draw a sled and carry his master, would be a king; and he who would make the wind and the water turn a wheel to grind the corn, might be worshiped as a god. Then imagine that after a day's toil that brought no hope, and a night's sleep that brought no dreams of rest, men should suddenly awake as into a world of enchantment, and find themselves supernaturally endowed, so that they could accomplish with their hands, or by a wish all that we do with all the tools, machinery and appliances of modern life, as though each had a hundred arms and were gifted with magic—as though each were winged with swiftness like the wind, had sinews of steel and strength like the power of steam, and you will appreciate the miracle of art—realize what a load of toil invention has lifted from our shoulders, what a burden of care it has taken from the heart of human-

ity. Then, too, you will learn where the leisure comes from after actual wants are supplied, part of which goes into luxuries, ornaments, books, newspapers, paintings, music, houses, schools, churches, cities, culture, part into idleness, ennui, whisky, tobacco, fast life, folly, vice, crime, and all of which is called—civilization.

But this miracle of art is not the work of a night or the glory of an age; it is the work and glory of the whole of man's life on earth. In fable, Minerva sprang armed and panoplied from the brain of Jove; but in fact, art is the slowest growth of time. Take as an illustration the art of printing. The idea of printing is older than history or tradition. It is so natural and easy, it would have been strange if the idea of the printed book had not been suggested to Adam, if he had known his letters, by his own footprints on the sand. Seals were in use before the book of Job—possibly the oldest book in the world—was written; and seals used for making impressions contain the whole principle of printing. Bricks and tiles covered with characters, impressed upon the clay before it was burned, were common not only in Rome and Athens, but in Babylon and Nineveh. Wood engraving was brought into Europe from the East, long before books were printed. The printing of playing-cards probably first suggested the printing of books, which was at first simply wood engraving, each page being printed upon a block with raised letters. Then the letters were separated into wooden movable types; then metallic types were cast. Meantime the Arabs, by what processes of thought, by what slow stages of invention, I know not, had progressed from using the bark of plants, the papyrus of the Egyptian, to the manufacture of paper. The method of casting types, so that they could be easily multiplied, and the manufacture of paper, were the real difficulties in the invention of printing; when these were overcome, the Hoe cylinder press became easy, though it took the improvements of four hundred years to attain it. Nay, the press sowing newspapers daily all over the land, and sending streams of knowledge through all lands, so that whoever is athirst may come and drink, was as inevitable

as the impression of the ages when Job had written: "It is turned as clay to the seal."

Two centuries before the Christian era, Hero of Alexandria described a steam toy, a mere plaything. After 2,000 years' experiments, suggestions, and improvements, that plaything became the steam-engine. In the same manner the round-bottomed canoe, made from a log hollowed out with fire, grew into a ship. Fulton combined these two growths and made the steamboat. For more than one hundred years before Watt was born, the tram-road had been in use in England for conveying coal from the colliery to the place of shipment. Parallel rails, at first of wood, then of iron, were laid, to which wagons with grooved wheels were fitted and drawn by horses. Stephenson took the steam-engine of Watt, added the steam blast, mounted it on driving wheels, and made the locomotive; put it on the tram-road, and gave the world the railway.

Hargrave's spinning-jenny, Arkright's spinning frame, and Cartright's power-loom, which were but the development of the distaff, the spinning-wheel, and of the hand-loom, in which Joseph's many-colored coat was woven, were contemporary with the invention of the condensing steam-engine by Watt—about 1780—and the method of puddling and rolling iron immediately followed. The steam-engine revolutionized industry—as gunpowder had war—furnishing a power stupendous in its strength, marvelous in "the ease, precision, and ductility with which it can be varied and applied, so that it can engrave a seal, or crush masses of obdurate metal; draw out without breaking a thread fine as a gossamer, and lift a ship of war like a bauble in the air; embroider muslin, and forge anchors; cut steel into ribbons, and impel loaded vessels against the fury of the winds and waves;" it not only supplemented all mechanical arts, but it so stimulated the inventive faculties, that since then men have expressed their best thoughts in wood and iron. Surrounded here by these thoughts embodied in the visible forms of industry and art, we are in the presence of a poem, the epic of progress, in which the voices of all the ages blend, grander in its suggestions,

more inspiring in its hopes, and sublimer in its theme, than Homer, or Dante, or Milton sang.

But let us not suppose that the germs of art have reached their full fruition in our age, nor that the future will plagiarize the present or repeat the past. A galvanic toy, the plaything of to-day, may one day supersede the steam-engine. Steam, that is usually cited as the highest instance of the dominion of mind over matter, is expensive in the machinery and fuel it requires, dangerous and destructive in its explosive properties. Nature's grand forces are silent and safe. The rays of the sun exercise on earthly objects every day a *mechanical* power "in comparison with which the erection of the Egyptian pyramids dwindles into the labor of mites." The force that binds the earth together, particle to particle, is mightier than the earthquake that comes in visitation of terror. Who can touch the chain by which the sun holds the planets in their orbits? Hear what Professor Tyndale, the highest scientific authority, says, after a mathematical calculation of one of the molecular forces that are lavished around us: "I have seen the wild stone avalanches of the Alps, which smoke and thunder down the declivities with a vehemence almost sufficient to stun the observer. I have also seen snow-flakes descending so quickly as not to hurt the fragile spangles of which they are composed; yet, to produce from aqueous vapor a quantity of that tender material which a child could carry, demands an exertion of energy competent to gather up the shattered blocks of the largest stone avalanche I have ever seen, and pitch them to twice the height from which they fell." Shall not these forces in which nature is so prodigal be utilized in the art and service of man?

There are dominions of thought in which the mind has reached the limits of its capacity, but not in the sphere of mechanical invention. If we could be permitted to enter an art exhibition at Athens in the days of Pericles, while wandering through the department of machinery, agricultural implements, mechanical tools and power, we might exclaim against the poverty of the Greek mind, and the

barrenness of Grecian life. But when the statues of Phidias were unveiled—when those marbles "whose headless, armless trunks, in their severe and awful beauty, are at once the delight, admiration, and despair of modern artists," stood revealed in the full glory of their original perfection, we would admit that there, at least, the world had made no progress, for none was possible.

Or if a pupil of the divine Plato could revisit the earth, he might hear at the High School in San Francisco, boys and girls reciting like a hackneyed tale, truths in science his master would have died to know; but when he would mingle with the sages of the earth, he would find that in philosophy the thoughts of his great teacher were the boundaries of human speculation, that the highest office of philosophy now was but to interpret thoughts uttered 2,500 years ago. He could wander around the earth and hear no language spoken superior to the Greek in purer compass and flexibility; and he would learn that in poverty, eloquence and history, Grecian mind had furnished the models for all succeeding ages, in eloquence, poetry and philosophy, in sculpture, painting, and possibly in the forms of architecture, in language as a medium for the expression of thought, and possibly in music, the language of the emotions, there will be no higher attainment than has already been reached. No race will ever arise superior to the Greek in intellectual and physical organization; and no men born of women will ever thrust Homer and Shakespeare, Phidias and Raphael, Demosthenes and Mozart from their thrones of pre-eminence.

There are also two devices, or inventions, which are, humanly speaking, perfect. One is that of Arabic numerals and the method of decimation, by which the ten simple figures the school-boy scrawls upon his slate can be made to express every thing the mind can conceive in numbers, reaching upward toward the infinite, and downward toward the infinitesimal. The other is the invention of the alphabet, of letters, by which twenty-six characters have become the factors of all human intelligence, bearing from generation to generation the thoughts and wisdom and

learning of men; have become the world's memory, permitting nothing to perish that is worthy to survive; an invention so difficult to conceive, so simple in use, so grand and complete, that the world had better lose all other arts combined than to forget its A B C's. Sometimes I have thought of them as of twenty-six soldiers that set out to conquer the world. That A was an archer, and B was a bugler, and C was a corporal, and D was a drummer, and E was an ensign, and F was a fifer, and G was a gunner, down to Z, who was a zouave, and these twenty-six drill-sergeants have subdued the kingdoms of the earth and of the air, taken possession of the realms of thought, and founded a republic of which the wise and noble of all time are citizens and contemporaries, where there is neither death nor forgetfulness—the imperial republic of letters. Again I have thought of them as of a telegraphic cable laid beneath the waters of time, safe from disturbing storm and tempest—so short, the child's primer will contain it, so long it connects the remotest ages with the present, and will stretch to the last syllable of recorded time. We pride ourselves on the successful laying of the Atlantic cable as the crowning achievement of human invention; but here is a cable that speaks not in broken, doubtful, and sibylline utterance, but charged with the whole spiritual power of all human intelligence, with a circuit reaching through all time, connecting all brains and all hearts in its network, and certain to carry every message worthy to go there to the last man who shall live upon earth.

Here is an invention so simple that the child learns its use while playing with his blocks; so grand that all generations can not exhaust its capabilities; so perfect, no age will be able to add to or take from. In the invention of letters, man arose nearest to creative power. In other inventions he has dealt with material substance, with tangible things; in letters he created from nothing forms into which he himself could breathe the spirit of life, the immortal soul of power and eloquence and beauty.

In letters, the mind has reached the highest heaven of invention; in literature and the fine arts it has touched the

boundaries of its power, and knows where the horizon meets the earth; but in science and the mechanical arts there will be no limit to improvement while nature has one secret unrevealed, one force unappropriated. In those grand domains there "is ample scope and verge enough" for the thought, investigation, and skill of all generations to come, and the work of each generation will be but the scaffolding on which the next shall stand, building ever toward a sky that recedes as it is approached.

ROSALIE.

Now twilight sits upon the hill
And lengthened shades the valley fill;
The wild bird's song is hushed, and still
Is dreaming nature, Rosalie;
While here within this spot, o'ergrown
With leaves and flowers, I sit alone,
To muse on thee and hours flown,
Love-winged and joyous, Rosalie.

To muse upon those happy times,
When first I won thee with my rhymes;
When sweet as music's vesper chimes,
Our hearts accorded, Rosalie;
When life flow'd ever like the stream
Of some brain-pictured lovely dream,
Where airy shapes and fancies gleam
Upon its bright waves, Rosalie.

Afar in memory's misty light—
As stars steal through the gloom of light—
The twinklings of a vision bright
Come gently o'er me, Rosalie;
A vine-clad cot beneath the hill—
The gladsome wanderings of a rill—
A form which love's bright beamings fill—
Are all before me, Rosalie.

Once more we walk this wildwood shade,
Where oft in "love's young dream" we stray'd,
Again upon the flowery glade
We pick bright blossoms, Rosalie;
Once more I hear the wild bird's song
That charmed us all the summer long,
And with it comes a glorious throng
Of bright-winged visions, Rosalie.

And as the stars come out to-night,
All trembling on their lonely height,
Methinks amid their dewy light
Thine eyes shine on me, Rosalie;
Those soft, those gently speaking eyes,
Where hopes and pleasant memories,
Like silver waves, alternate rise
Upon a bright sea, Rosalie.

Thy face to me was as a tide,
Where barks, love-laden, ever glide,
With Hope, their pilot and their guide,
And I their haven, Rosalie;
But ah! a cloud on swift wings passed,
And all the sky was overcast,
And then were wrecked, alas! too fast,
My freighted treasures, Rosalie.

I can not twine my fingers now
In thy soft hair, nor kiss thy brow,
Nor hear thy gentle accents flow
In murmured music, Rosalie;
I can not feel thy breath so warm
Upon my cheek, nor press thy form,
Which, like a flow'ret in a storm,
Slept on my bosom, Rosalie.

And though each wild bird sings of thee,
And in each summer flower I see
Thy own eyes, bright exceedingly,
Look up and greet me, Rosalie;

I start and sigh to think that thou
Art but, to me, a memory now—
A star that gemmed life's morning brow,
Then fled and left me, Rosalie.

A tall oak stricken in its pride—
The fierce red bolt has rent its side—
Scatters its seared leaves far and wide
Upon the cold heath, Rosalie;
So too my heart is sorely riven
By a stern fate, 'gainst which I've striven,
Till my poor thoughts like leaves are driven
Upon the rude world, Rosalie.

And I have sought to find, in vain,
This vision of my youth again;
And I have dreamed until my brain
Was wild with dreaming, Rosalie;
But, oh! to sit and muse alone,
Within this spot with flowers o'ergrown,
Is all that's left me now, my own,
My lost, my lovely Rosalie.

Col. B. F. Washington.

PROFESSOR POWELL'S LECTURE ON THE PEAKS, PARKS, AND PLAINS OF COLORADO.

PROF. POWELL illustrated by various beautiful and impressive similes the passage of time and its inexorable influence on the face of the globe. Water was the great leveler, crumbling down the hills and mountains, making vast subterranean chambers. He described the slow formation of the Mammoth Cave in Kentucky, to give an idea of time. All lands had been baptized—had risen from under the water. Many Mammoth Cave periods ago the crust of the earth was thin and plastic. Earthquakes kept upheaving parts of the earth's crust, but it was too weak to sustain them, and so they sank and were upraised again until the

strata were bent and twisted up as we see them on the mountains. Nature used earthquakes to knead the earth's crust to a consistency that would sustain continents. He described the period when the Colorado mountains, newly-upheaved, were laved by a shallow torrid sea, on whose shores grew tropical plants and wandered strange animals now extinct. Forests grew upon the remains of forests, in almost interminable succession. Then they would sink to be covered with sand. This process was gone through with again and again. Hence beds of coal, alternately with strata of sandstone. A bed of coal was one of Dame Nature's pots of pickled sunbeams. On the west side of the range the sea was filling up as on this with scaly shales, slates, coal, limestone, &c. He would describe one of the animals of that period. Its substance was jelly quartz, and myriads and generations of them were connected together. The shells of these animals crystallize into the agates found in the Middle Park. He had seen a stratum of these agates with six feet of magnesian clay over it, then agates, then clay, for two hundred feet in thickness.

At length the earth's crust was kneaded to a sufficient solidity to bear up the mountains, and the great Rocky Mountains were laid up to dry. As they dried and shrank, fissures were made. These became minerals in due time. Their east and west course had relation to the magnetic currents. Scientific men agreed that these currents were caused by the falling of the sunbeams in waves on the earth—the same old story of sunbeams condensed into coal. It was popularly supposed that far down toward the center of the earth was an ocean of molten metal which had been projected outward through fissures in the earth's crust. But the idea was rejected by the learned. Every thing was in motion by molecules, and all that is necessary in order to segregate the minerals from the rocks is to direct these molecular motions. The elevations of the mountains were attended by igneous phenomena. Rivers of molten rock were belched forth and poured down into the parks and on the plains. In the Middle Park a basin had been formed fifty by sixty miles in extent. One great fissure of this kind had

filled that basin five hundred feet deep with hot lava. It was poured into the basin while it was filled with water. Then were born the storms; the rain fell incessantly. Another of these lava streams was poured out at Valmont, and one at Golden City. He had fished for trout in Middle Park, at the base of a monument of the tertiary ages that lifted its head 2,000 feet into the air.

The waters falling on the elevated platform for vast periods had worn out the valleys, sculptured the mountain-peaks, and cut channels for themselves to the sea. The plains were thus finished off by the debris of the mountains. The mountains again were crumbled down by frost, the iron cubes of the lodes decomposed, some of the gold settling into the lodes, making their backs very rich, some of it being carried down in low places, constituting the placer diggings. The clouds were the artists that shaped the contour of the earth. The length of time, amount of motion, and vast work of the waters, had impressed him most in thirteen years' study of nature. When the mountains were uplifted, the rock strata were pent up at the edges, the soft ones were then washed out by the water, leaving the harder strata standing. Hence the parallel ridges of red sandstone at the base of the mountains, hundreds of feet high, called "hog's-back." This sandstone formation was 9,700 feet thick, which measured the distance this grand plateau in the middle Colorado was lifted up.

As we enter the South Park at Montgomery, we seem to be walled in by towering mountains. We are in Lincoln Park, containing one hundred and fifty acres, at the base of Mount Lincoln. Lakes fed from eternal snow-banks bound their waters over rocks from two hundred to nine hundred feet high. There were one hundred and twenty-three cascades pouring into this little park. Sitting there with a friend a short time ago, he had witnessed the sudden gathering of a storm. The immense dense cloud seemed to give a black light, a shadow—we were in the land of shades. His friend remarked, "The valley of the shadow of death." They sought shelter under the rocks, and watched the breaking of the storm. Then came the rainbow, making

iridescent the rocks against which it was flung. "My friends," said the lecturer, "I can but exclaim, O God! Creator of all, how wonderful are Thy works!"—*Colorado Register*, April, 1868.

CALIFORNIA.

THE *Old Pah-Utah*, Lovejoy's paper, published at Washoe City, Nevada, paints the following flattering but truthful picture of this State :—

How she sits like a queen beside the beautiful, sunset sea! How grand her place, how glorious her destiny; ribbed round by solemn, guardian mountains, the pines are her everlasting sentinels; strange, beautiful flowers, interwoven, make her diadem; her scepter is virgin gold, her canopy a cloudless sky. An empire, complete in herself! Were she, in a moment, rent from the continent, and made an island of the sea, still every needful thing to make a nation great would be found, either developed, or a living germ in her sustaining breast. How proud she sits, her Golden Gate swung backward for the world's great ships to enter; her mighty land-locked bay, at rest, an anchorage where the whole world's ships might ride. That bay, beautiful at first, and now with glory a thousand times enhanced by that city that came, at the touch of Midas, and unfolded its glittering splendor on the still bay's sandy shore. Beyond these, stretching away, mile after mile, in incomprehensible vastness, sleep her fertile plains, waiting for the coming millions who are to people them. And last of all, her moveless bulwark of adamant and gold. Her people too, how loyal, how brave and true, how appropriate for such a home, how worthy, as a whole, to be fathers and mothers of that people who are to see the Queen of the Pacific in the full fruition of her glory. Leal and true Californians! no stain is on your loyalty, and when the cries of dying men come flashing to your ears, your golden ingots are flung down as though they were

but water. Fair land! in thought it seems as though thou wert the last created, and that in thee was centered, by Omnipotence, the excellencies of every other clime.—*Dec.* 1863.

THE MOUNTAINS OF CALIFORNIA.

MUCH has been written by many able writers descriptive of the varied scenery of California; but, to get a correct idea, its mountains should be visited at different seasons of the year. The traveler who visits the highlands of California in early spring, or during the summer months, can not fail of being deeply impressed with the imposing grandeur of its scenery—its foaming cataracts, hedged with rough walls of granite; its towering mountains, capped with everlasting snow, while their sides are covered with a dense forest of the noblest trees; its broad valleys and sequestered glens, dressed in all the foliaceous beauty of spring, luxuriant with thrifty and well cultivated vegetation; while from the dark recesses of the mountains meandering streamlets come gushing forth, gliding merrily along until lost in distance, or sinking in some deep chasm, to burst forth again with renewed vigor in some dark forest, where quiet has dwelt for ages undisturbed except by murmuring waters and the sigh of the gentle mountain zephyr whose breath sways the lofty pine. Or, as the visitor stands on the shore of one of the many romantic lakes that lie sleeping in seclusion, "environed by mountains studded with lofty trees," its banks lined with dense underwood hung with rich foliage, and nestling in its clustering vines a charm that no man can withstand; and as the fragrance of many flowers is wafted over the silent waters of the lake, and you breathe the grateful odor, it can not fail to awake in the soul of every man (who allows his thoughts to range outside the citadel of selfishness or believes in a Creator), a lively spirit of admiration, and bring into action that unaccountable

emotion that environs the heart of every lover of nature and dwells in the soul of every true man. The man who is familiar with, and speaks disparagingly of, the scenery of California, may be justly looked on with distrust, as one who would not fail to do wrong where an opportunity offered.

But when the icy hand of winter spreads her mantle of snow over mountain and valley, covering the smooth waters of the lakes with a crust of glittering ice, the traveler bids adieu to the mountains and seeks a more genial climate. Has the country, that a few weeks since was clothed in the rich foliage of summer, lost its charm? We think not, but believe that there still remains something equally as interesting. Look at the extensive range of lofty mountains, at whose base the crisped brook still resounds: listen to the cataract's thunders, as it leaps from the crown of some high precipice, dashing through some deep gorge, heralding its course by the echoing mountains, until it makes its debouch upon broad and fertile plains, where it soon becomes mighty in its power, and sports as toys on its bosom the most powerful mechanism of man. Look again: upon the mountains, as they reflect the oblique rays of the morning sun—on the frost-covered pines, that stretch along their sides, or stand in groups at their base, making them resemble richly tesselated monuments capped with crowns of silver, and hung with the most gaudy tinsel. Is there not a charm in this? If it is not as pleasant as the more verdant scenes of spring and summer, it is as instructive. Does it not teach us a lesson of life, opening wide the text-book of nature, wherein we may study the four stages of manhood: the spring-time of youth, the summer of manhood, the fall of age, the winter of death?—*Downieville Sierra Citizen*, Aug., 1860.

EARTHQUAKE WAVES ON THE PACIFIC.

AN earthquake wave which followed the recent eruption in the Sandwich Islands, was transmitted to this coast and recorded on the Government self-registering tide-gauges at San Diego, San Francisco, and Astoria, in about five hours. On the 23d of December, 1854, a similar wave was transmitted from the coast of Japan to the Golden Gate in twelve hours and thirty-eight minutes. It will be recollected that this earthquake wave caused the wreck of the Russian frigate *Diana*, in the port of Simoda, and great loss of life.

These facts, which are derived from the best authority, convey a very impressive idea of the tremendous power required to disturb the whole body of an ocean, for a distance of from 3,000 to 5,000 miles, by a movement distinct from its ordinary tidal swing. It will be seen that the revulsion of the great tidal wave at Hawaii reached this coast, distant over 2,000 miles, in five hours, and was observed along a stretch of shore over thirteen geographical degrees in length. —*S. F. Bulletin*, June 13, 1868.

EARTHQUAKES IN THE INTERIOR.

A REMARKABLE series of earthquake shocks was experienced in the interior of this State and Nevada, about nine o'clock on the evening of May 30, 1868, of which no trace was felt at San Francisco, or north and south of a line from Sacramento to Fort Churchill. Although no damage is recorded, the jolts were sharp enough to rack the buildings in Virginia, and frighten people out of doors. The occurrence of such shocks in unusual places, is one of

the most puzzling facts to those who theorize upon the causes of volcanic disturbances, and is apparently inconsistent with the idea that these causes are decreasing in the force and frequency of their operation. If such disturbances were confined to the localities and neighborhood of active volcanoes, the phenomena would be more intelligible; but their shifting occurrence, with peculiar severity, in localities remote from any vent, as in the valley of the Mississippi, and in the plateau of Nevada, complicates the study of causes, and inclines us to the opinion that sudden and tremendous outbursts are probable anywhere. Nevada, which has seldom felt the shocks experienced in San Francisco, was evidently at a comparatively recent period, the seat of a very lively and extensive display of volcanic energy. The old craters, the surface distribution of pumice and ashes, the hot springs, are sufficient proof on this score; but there are no such evidences in the lower Mississippi Valley, where remarkable disturbances have been noted on several occasions since the region became known to white men. But much more remarkable disturbances, independent of active volcanoes, have been recorded. Mention was made in our last issue of the sudden elevation of a volcanic mountain, 1,600 feet high, in Central America, in 1770. Humboldt describes in his voyages a more wonderful eruption yet, which took place in Mexico about fifty years before his visit to that country—or, say about 1759. The locality of this eruption was the Intendancy of Valladolid. The country was a fertile plain, nowhere more than 2,600 feet above the sea, over one hundred miles from the coast, and about one hundred and twenty-six miles from any active volcano. Till the middle of the eighteenth century, fields of sugar-cane, indigo, and cotton, and fine gardens, supporting several villages, covered this plain. Suddenly one day subterranean noises were heard, accompanied by numerous dreadful earthquakes, lasting through fifty or sixty days. After an interval of a few days, the sounds and shocks recommenced, a tract of ground from three to four square miles rose up in the shape of a bladder, and the convexity steadily increased in height to five hundred and twenty

feet, when flames issued from an area of half a square league, fragments of broken rocks were thrown up to great heights through a thick cloud of ashes illuminated by fire, and the softened surface of the earth swelled like an agitated sea. Two rivers poured into the burning chasms, invigorating the fire by the decomposition of their waters. Thousands of small volcanic cones rose over the plain, and in the midst six large ones arose, from 1,300 to 1,700 feet above the level of the surrounding land. The most elevated of these cones was the great volcano of Jorullo, which belched forth fire, smoke, rocks, and lava, furiously for about nine months, after which its eruptions gradually ceased. The plain was, of course, desolated, and the people abandoned it in terror. Such paroxysmal outbreaks as this are naturally recalled to memory by local shocks like those in Nevada, and confirm the impression that the occasional *tremblars* of San Francisco are not to be regarded as especially threatening.—*S. F. Bulletin*, May 30, 1868.

GREAT VOLCANO ERUPTIONS.

OW, when we bear in mind that a mere scratch on the surface of our globe, which is nearly 8,000 miles in diameter (for so the depth of only one mile must be considered), brings us to a temperature of 105 degrees, we have only to descend in imagination to the still comparatively slight depth of twenty miles to find the earth's crust red-hot, while, if the temperature continues to increase regularly according to the same law, we should come at no very great depth beyond on a liquid sea of fire. But it is probable that this molten mass is a greater distance from us than this theory would place it. Astronomical calculations tend to prove that the crust of the earth is at least eight hundred miles thick, and that the coating of our globe must be extremely solid and rigid to enable our planet to preserve its figure. But the farther we remove the seat of the subterranean force from

us, the more must we be struck by its great power. Earthquakes are indeed terrific evidence of mysterious dynamic laws; but it is only when the subterranean expansive force breaks through the earth's crust, and after violent earth-throes a volcano becomes active, that we obtain a just idea of the forces at work in nature's secret laboratory. A grand example of the tremendous action of this force may be seen in the Monte Nuevo of the Phlegræan fields, which was formed in September, 1558, on the site of the Lucrine Lake, once famous for its oysters. The eruption continued without intermission two days and two nights, and on the third day people climbed to the top of the new hill, four hundred and forty feet high, and looked into the crater, four hundred and twenty-one feet deep, within which stones were boiling up. The mountain has remained quiescent ever since that period. On the other hand, the volcano of Izalco, in Central America, rose suddenly to the height of 1,600 feet on February 23, 1770, and has remained since in such constant activity as to serve as a beacon to mariners. The volcano of Tomboro, in Sumbawa, is another amazing evidence of subterranean force. In 1815, it yielded ashes and scoriæ sufficient to form three mountains, each equal in cubic contents to Mount Blanc, or to cover the whole of Germany with scoriæ two feet deep. But even more tremendous is the volcano of Mauna Loa, a huge dome-shaped mountain in Hawaii, nearly 14,000 feet above the sea, formed chiefly by the repeated outflows of a highly liquid lava boiling up and cascading over the lips of a central vent at its summit. The phenomena of this volcano are on the most stupendous scale. The highest crater, which is circular, 8,000 feet in diameter, and 830 feet deep, is frequently filled by the welling up of the lava from the vents at its bottom. During one of the latest eruptions, the lava stream extended sixty-five miles, and averaged four miles in width, and twelve feet in depth. Its discharge was accompanied by columns of fire, scoriæ of filamentous lava (called Pele's hair), and dense vapor, which towered over the crater to the height of eight hundred feet for twenty days, darkening the sun, and obscuring every object a few yards distant; while from the

surface of the lava currents clouds of steam rolled upward. On this occasion it is calculated that within ten months, 15,400,000,000 cubic feet of molten matter were blown out of the crater, and that the lava overflowed an area of 200,000 acres in the same period of time.—*Frazer's Magazine.*

EXISTENCE OR LIFE.

N many a tombstone where it is written, "Here lies so-and-so, aged seventy years," the true inscription would read, "In memory of a soul who in seventy years lived about five minutes, and that was when he first found himself in love." A dandy lives not by the clock or almanac, but from one neck-tie to another. A fashionable woman lives from one wrinkle to another. The politician from one Presidential election to another. The epicure from turtle to turtle. The philosopher from the perception of one principle to the dawning of another. The philanthropist from one act of charity to another.

Think of the crowning hours of men's lives, if you would learn how much living can be crowded into a minute; of Copernicus, when he first saw the sun stop in its career, and the earth, like a moth, begin to flutter round it; of Newton, when the law of gravity was first breaking into the inclosure of his philosophy, and at the same glance he saw his own name written forever on the starry sky; of Le Verrier, when from Berlin word came back that a new planet had been evoked, by the sorcery of his mathematics, to spin a wider thread of reflected light than had ever before been traced; of Washington, when the English general's sword was surrendered to him at Yorktown; of Columbus, when on his deck, "before the upright man there arose a light"—when San Salvador lifted its candle to his sight, and shot its ray across on Castile; and for the jeers of a continent, the mutiny of his men, he was repaid as he saw that the round idea that haunted him was demonstrated.

To pictures like these we must turn to understand the untranslatable bliss of which a moment is capable—to learn what fast living really is.—*Rev. T. Starr King.*

BULK OF GOLD IN THE WORLD.

CCORDING to the estimates given in the *Evening Post* three weeks ago, the whole amount of gold in the world at the present moment is about 5,950,000,000 dollars in value. It may be of interest to see what the bulk of this amount of gold would be if it was all melted and run together. Pure gold is more than nineteen times as heavy as water, and a cubic foot of water weighs 1,000 ounces avoirdupois. A cubic foot of gold, then, would weight over 19,000 ounces avoirdupois; and every such ounce of fine gold is worth, according to our coinage, somewhat more than eighteen dollars. So then the whole cubic foot of gold would be worth a little more than a third of a million dollars. A cubic yard of solid gold would be worth twenty-seven times as much as that, or over nine million dollars; and six hundred and sixty cubic yards would contain somewhat more than the 5,950,000,000 dollars gold in the world. These six hundred and sixty cubic yards would be contained within a room five yards high, eight yards wide, and six yards long; say a good sized parlor or a store of moderate size. "But," says some one, "gold is so very malleable that even this small bulk of it would gild over the whole earth." But he either over-estimates the malleability of gold, or, more likely, under-estimates the size of the earth. It takes 1,280,000 leaves of the thinnest gold foil to make an inch in thickness, or about fifteen millions and a third to make a foot, or about 46,000 to a yard. A cubic yard of gold, therefore, could be beaten out so as to cover 46,000,000 square yards, somewhat less than 10,000 acres, for there are 4,480 square yards to the acre. Then, as there are six hundred and forty acres to the square mile,

the whole six hundred and sixty cubic yards of gold could be beaten out so as to cover about 10,000 square miles—that is, a tract only one hundred miles square, less than the extent of Vermont, and a little more than a fifth of either New York or Pennsylvania.—*Cor. N. Y. Evening Post.*

THE CRY OF A LOST SOUL.

[THE Lost Soul, *Alma perdida*, is the term applied by the Indians to a bird whose melancholy cry is heard at night on the margins of the Amazon.]

IN that black forest, where, when day is done,
With a snake's stillness glides the Amazon
Darkly from sunset to the rising sun,

A cry, as of the pained heart of the wood,
The long, despairing moan of solitude
And darkness and the absence of all good,

Startles the traveler, with a sound so drear,
So full of hopeless agony and fear,
His heart stands still and listens like his ear.

The guide, as if he heard a dead-bell toll,
Starts, drops his oar against the gunwale's thole,
Crosses himself, and whispers, "A lost soul!"

"No, Señor, not a bird. I know it well,—
It is the pained soul of some infidel
Or cursed heretic that cries from hell.

"Poor fool! with hope still mocking his despair,
He wanders, shrieking on the midnight air
For human pity and for Christian prayer.

"Saints strike him dumb! Our holy Mother hath
No prayer for him who, sinning unto death,
Burns always in the furnace of God's wrath!"

Thus to the baptized pagan's cruel lie,
Lending new horror to that mournful cry,
The voyager listens, making no reply.

Dim burns the boat-lamp: shadows deepen round,
From giant trees with snake-like creepers wound,
And the black water glides without a sound.

But in the traveler's heart a secret sense
Of nature plastic to benign intents,
And an eternal good in Providence,

Lifts to the starry calm of heaven his eyes;
And lo! rebuking all earth's ominous cries,
The Cross of pardon lights the tropic skies!

"Father of all!" he urges his strong plea,
"Thou lovest all: thy erring child may be
Lost to himself, but never lost to Thee!

"All souls are Thine; the wings of morning bear
None from that Presence which is everywhere,
Nor hell itself can hide, for Thou art there.

"Through sins of sense, perversities of will,
Through doubt and pain, through guilt and shame and ill,
Thy pitying eye is on Thy creature still.

"Wilt thou not make, Eternal Source and Goal!
In Thy long years, life's broken circle whole,
And change to praise the cry of a lost soul?"

JOHN G. WHITTIER.

CARIB SCOUT BOAT ON THE LOOKOUT.

THE Caribs were the boldest of the West Indian tribes, and their name has remained almost a synonym for cruelty and daring. Europeans found them the terror of the milder tribes, for, at home on the sea in the midst of storms, they swept from island to island, everywhere as conquerors, or as lords, meeting man as they met the elements, undismayed.

The Spaniard with his mimic thunder, his death-dealing fire-arms, sent no terror through their breasts; but discerning in them a more potent foe, they resorted to greater skill and precautions in war. Scout boats, light structures, built like the birch canoes of our river and lake tribes, but firmer and better adapted for the sea, were sent out to explore and give notice of hostile movements.

The Caribs have now almost entirely passed away, but a few still linger in Trinidad, Dominica, and St. Vincent, as well as on the shores of South America.—*Chimney Corner.*

SIGNIFICANT NAMES.

THE "magnet" has its name from Magnesia. The "bayonet" tells us that it was first made at Bayonne; "worsted," that it was first spun at a village of the same name in the vicinity of Norwich; "cambrics," that they reached us from Cambrao; "damask," from Damascus; the "damson," also the "Damascene," or Damascus plum; "dimity," from Damietta; "cordwain," or "cordovan," from Cordova; "currants," Corinth; "indigo" (indicum), from India; "agates," from a Sicilian river, Achates; "jalap," from Jalapa, a town in Mexico; "parchment," from Pergamum; the "guinea," that it was originally coined (in the year 1663) of gold brought from the African coast so-called; "camlet," that it was woven in part of camel's hair. The fashion of the cravat was borrowed from the Croats, or "Crobats," as they used, in the sixteenth century, to be called. Such has been the manufacturing process of England, that English calicoes and muslins are now sent to India and the East; yet the words give standing witness that England once imported them thence, for "calico" is from Calicut, and "muslin" from Moussul, a city in Asiatic Turkey.

A WONDERFUL CASE—THE MAN WHO HAD A CROWBAR SHOT THROUGH HIS SKULL.

WE had lost all track of late years, of the man who recovered after having had a crowbar shot through his brain, by the premature explosion of a blast which he was tamping in Vermont, some twenty years ago. But the following account of proceedings in the Massachusetts Medical Society last Wednesday, not only revives this wonderful case, but presents many hitherto unpublished facts in it. It is highly interesting. Probably no such case ever occurred before in the history of the world. We published accounts of it many years ago; but nothing so full, precise, interesting and authentic, has ever been given to the public, concerning this case, as the following. That crowbar, that has penetrated the inner recesses of "thought's mysterious seat," without destroying life, was exhibited, together with the skull through which it passed:—

A WONDERFUL SKULL—STORY OF A REMARKABLE CURE—A PRESENT TO THE MASSACHUSETTS MEDICAL SOCIETY.

At the meeting of the Massachusetts Medical Society on Wednesday, Dr. John M. Harlow, physician and surgeon, of Woburn, but formerly of Cavendish, Vermont, read a paper containing the history of a most interesting case of injury to the head, and presented to the meeting the veritable skull which sustained the injury.

This case occurred some twenty years ago, in Cavendish, Vermont, and was described at length in the *Traveler* a few days later. On the 13th of September, 1848, Phineas P. Gage, foreman of a gang of men engaged in blasting a deep cut in the continuation of the Rutland and Burlington road, had a tamping iron blown through his brains, and recovered within sixty days, living twelve years after. The case caused great discussion when reported by Dr. Harlow in the medical journals at that time, and it was largely disbelieved, many eminent surgeons declaring the occurrence

as described, to be a physiological impossibility. Dr. Harlow, in presenting the paper to-day, justly said, that it is due to science that a case so grave, and succeeded by such remarkable results, should not be lost sight of, and that its subsequent story should have a permanent record.

The tamping-iron was three and half feet in length, one and a quarter inch thick, and pointed at one end, the taper being seven inches long, and the diameter of the point a quarter of an inch. It weighed thirteen pounds. The point was upward, and the iron smooth.

Gage was a perfectly healthy, strong and active young man, twenty-five years of age, of nervous temperament, five and a half feet in height, average weight one hundred and fifty pounds, possessing an iron will as well as an iron frame, muscular system remarkably well developed, having had scarcely a day's illness from childhood up.

As described in the paper read, it appears that a drill hole had been charged with powder, and he was about tamping it in (or, more popularly, ramming it down), when his attention was called for a moment. Looking over his shoulder at his men, he at the same moment rammed down the iron, supposing his assistant had poured sand on the powder, as is the custom. The iron struck fire from the rock, the charge exploded, and the iron was driven up into his cheek and out of the top of his head, high in the air, and was afterward found several rods distant, smeared with blood and brains.

The missile entered, by its pointed end, the left side of the face, immediately anterior to the angle of the lower jaw, and passing obliquely upward and slightly backward, emerged out of the top of the head in the median line, at the back part of the frontal bone, near the coronal suture. The ordinary reader will understand it better, if we say that, pointing upward, it entered the cheek outside the teeth, and under the cheek bone, went inside an inch behind the eye, and out of the top of the head in the center, two inches back of the line where the forehead and hair meet.

The patient was thrown on his back, and gave a few con-

vulsive motions of the extremities, but spoke in a few minutes. He was taken three-quarters of a mile in a sitting position in a cart, got out of the cart himself with the aid of his men, and an hour afterward, with the assistance of Dr. Harlow holding his arm, walked up a flight of stairs to his room. He was conscious, but exhausted from loss of blood, which found its way from the mouth into the stomach, and was ejected as often as every fifteen or twenty minutes by vomiting. His bed and person were soon a gore of blood.

One piece of the skull had been broken out in fragments; another piece was raised and thrown back, like a door, the scalp serving as a hinge; and on the opposite of the wound there was another fracture and an elevation. The globe of the left eye was partially protruded from its orbit, the left side of the face was more prominent than the right. The opening in the skull was two inches wide by three and a half long, and the brain was hanging in shreds on the hair. The pulsation of the brain could be distinctly seen, and the doctor passed his finger in its whole length, without the patient saying he felt pain.

The paper gives an account of the treatment of the case. In fifty-nine days the patient was abroad. On the third day there was inflammation and some delirium, and during several weeks there was occasional delirium; for two weeks of the time the patient lay in a stupid condition, and his death was expected and his grave-clothes prepared. On the 25th of November he went in a close carriage, thirty miles, to his home in Lebanon.

The subsequent history of the case is interesting. Gage came back to Cavendish in April in fair health and strength, having his tamping-iron with him, and he carried it with him till the day of his death, twelve years after. The effect of the injury appears to have been the destruction of the equilibrium between his intellectual faculties and the animal propensities. He was now capricious, fitful, irreverent, impatient of restraint, vacillating, a youth in intellectual capacity and manifestations, a man in physical system and passions. His physical recovery was complete, but those

who once knew him as a shrewd, smart, energetic, persistent business man, recognized the change in his mental character. The balance of his mind was gone. He used to give his nephews and nieces wonderful accounts of his hair-breadth escapes, without foundation in fact, and conceived a great fondness for pets.

He went to various places, being engaged here and there; was a year and a half in charge of horses at a livery stable; was exhibited at Barnum's Museum in New York; and, in August, 1852, four years after his injury, left New England forever, and went to Valparaiso with a man who was going to establish a line of coaches. Here he lived eight years, occasionally driving a six-horse coach, and enduring many hardships. In 1859 his health began to fail, and in 1860 he had a long illness, the nature of which can not now be ascertained.

He now left Chili, and Dr. Harlow lost all traces of him for some years, but finally found out that the mother and sister were in San Francisco, wrote to them, and ascertained that Gage arrived there in 1860; worked with a farmer at Santa Clara, and, in February, 1861, was taken with epileptic fits; afterward he worked in several places; and, finally, in May, 1861, had a succession of fits, which lasted a couple of days, and carried him off. There was no autopsy made. Dr. Harlow made overtures for the possession of the skull, on account of its scientific interest, and the world at large is under obligation to the relatives who were willing to surrender it for the uses of medical science. It appears that the man could see out of his left eye, though the lid was not fully subject to the will, and that he was troubled with uneasiness in the head.

Dr. Harlow, in summing up his valuable but interesting paper, presented these views:—1st. The recovery is attributed solely to the vis vitæ, vis conservatrix, or, if some like it, vis medicatrix naturæ. [In plain words, he had a good constitution.] 2d. This case has been cited as one of recovery; physically, the recovery was nearly or quite completed for the four years immediately succeeding the injury, but ultimately the patient succumbed to progressive

disease of the brain. Mentally, the recovery was only partial; there was no dementia; intellectual operations were perfect in kind, but not in degree or quality. 3d. Though the case may seem improbable, yet the subject was the man for the case, as his will, physique, and capacity for endurance could scarcely be equaled; the missile was smooth and pointed, dilating and wedging off rather than lacerating the tissues; the bolt did little injury till it entered the base of the brain, and that opening served as a drain for the blood and matter, and other substances that might have caused death by compression; the part of the brain traversed was the strongest for the purpose.

Dr. Harlow had with him, and exhibited, the skull and the iron.

The piece of skull, which was thrown backward like a door, and was afterward replaced, had grown to the opposite edge by a new formation of bone plainly marked; the holes were large and well defined, and the whole appearance of the skull proved the truth of the account, which has also been verified by letters from some of the first men in Cavendish, Vt. It appears that early in the history of the case, a number of fragments of bone came down into the mouth through the openings in the inside, and were voided.

A great deal of interest was manifested in the examination of these important contributions to surgical science, and Dr. Harlow was abundantly complimented for the persistence with which he had followed up the case for nearly twenty years.—*Boston Traveler*, June 4, 1868.

TRACES OF THE ANCIENT HALF-CIVILIZED INDIANS IN CALIFORNIA.

IT has often been asserted by writers on this State and Mexico, that no traces exist within our boundaries of the ancient civilized Indian races who are assumed by some to have passed across the Gila from Central Alta California, and founded in Mexico the Toltec and Mexican

civilizations; passing, in their several journeys, through Sonora, Sinaloa, Durango, &c., until the elevated tropical valleys of Mexico and Central America, as far even as the mountains of Chiriqui on the Panama Isthmus, are reached. Probably the civilizations of the Mississippi valleys formed one system of civilization; those of Alta California, Chihuahua, and New Mexico formed another system; those of Arituaba, near Altar, and in Sinaloa, another; those of Mexico Valley, Michoacan, and Oaxaca, another; those of Chiapas, Yucatan, Nicaragua, and Guatemala, another; and those of Honduras, Costa Rica, and Chiriqui the last. The extent of this mighty, ancient Indian empire of the interior uplands of North America is truly wonderful, extending from the southern rim of the Great Basin to the Isthmus of Panama, and lying on both ocean coasts. This may veritably be termed the ruins of a great empire, and of a people wonderfully skilled in many arts, who have left no other traces behind them but vast buildings and deserted fields—their very name and language have expired from the earth. The ruins of Oriental populations can bear no comparison to it in extent and marvel.

There does exist, we affirm, some *certain traces* of this ancient empire within the boundaries of our State. A communication appeared in the San Francisco *Bulletin* of July, 1861, from near Owen's Lake, in 36° 30′, giving a highly interesting account of a remnant of this race still living in that vicinity, and also of many traces of a more remote civilization all through the lately explored districts of the Coso mineral regions. A fact was also noted by its first explorer, Mr. Farley, in 1860, as to many hieroglyphics and ancient well-worn roads. We were informed lately by a friend that in the Valley of the Painted Rock, which is about four days' journey east by south from the Tejon Pass, exist many curious paintings in blue, white, and red, with Indian figures, also Spanish ones of the time before 1820. In the valley are now corrals for catching horses from the Tulare plains, erected by the Californians since 1850, and an old Californian told us the soldiers of an expedition he was with in 1815 reached these painted

rocks and found the figures there *then;* also, at another place nearly opposite to the other and which is situated in the Coast Range, in a cañada leading from the San Juan arroyo, which empties into the Salinas River near the Mission of San Miguel. It is not far from the Sulphur or Carisso Springs there, and a few miles only from the borders of the great valley. These last paintings are said to be on soft sandstone rocks; while those of the first, at Painted Rock Valley, are on a hard, bluish rock, and the rock itself is about twenty feet square in dimensions, hollow in the middle, like a bowl with the bottom knocked out. Other paintings or hieroglyphics are found also in the vicinity of Truckee Lake. This Painted Rock Valley hollows off to the east, and makes an immense plain, without wood, and with water in small but deep holes. These water holes are only a few feet across, and entirely bare of wood near them, and are nearly always situated on the tops of hills. The Painted Rock Valley does not empty into the Tulare plains, but into the eastern aspects of New Mexico, and is south of the Coso region. Great bands of the bighorn or mountain sheep are found in its vicinity, and are excellent eating, but the pelt is like that of deer, with hair, and not wool. The range of this animal is all along the San Bernardino Mountains, into Northern Lower California as far as the ocean, and eastward to the head of the Gulf, the mountains of the Gila, and all the country north from the Gila to the southern rim of the Great Basin. The bands are often thousands in number, the males with immense horns, while the females are without this appendage.

This gentleman informs us that while hunting in the Tulare lakes he found immense numbers of the white swan, who make their nests on tule floats, and hatch three or four young a year. They will often weigh thirty pounds, and are excellent eating and very fat, and much sought after by the hunters. They feed partly on the fresh water muscle, or clam, which is found in extraordinary abundance in all the Tulare waters, completely paving the bottom and very dangerous to walk on, as they are thin and brittle, and will cut like glass. The Indians feed greedily on them, and

latterly they are used to fatten the hogs bred in that vicinity. This muscle has a shell of silicarious and not calcareous formation, and weighs about three ounces. It is found in all the fresh water lagunas of the coast.

It is a very singular thing that these Tulare lakes have never been carefully explored. They are said to have been discovered by Padre Pedro Font, in 1775, in a journey overland from Sonora to Monterey with Captain Anzar, who was afterward killed on the Colorado by the Yumas. In 1819, a very careful survey was made of them in an expedition from Monterey, commanded by Captain J. M. Estudillo, who made a small, but very detailed, map of the Lake country, a copy of which may be seen in the Surveyor-General's office in San Francisco.

Another trace of the ancient Indians exists in our State on the San Cayatano Rancho of the Saticoy Valley, belonging to the Messrs. Mores. This trace is a large field of some five hundred acres, divided by exactly parallel lines of earth, formerly irrigated, and which we are assured is neither the work of the Mission Indians nor those existing. It is divided exactly like those of the Gila or Pima Indians. All the canal or *acequia* marks are very old, and entirely different from those of the Mission Indians, which can be seen in the same valley in several places. The field is situated on a dry *mesa*, about a league from the ranch house, and near the mouth of the Sespe arroyo; the supplying canal can be traced two or three miles up that arroyo. Near by are found several singular mounds, which may be burial-places; they are in hollows of the ground not far from the plateau. We were assured by an American who had resided in the valley several years, that he was very sure that this field was never cultivated or irrigated by the Mission or present Indians, and that it had always puzzled him, and he concluded it must have been done by the ancient Indians, of whom we know nothing. He had heard of the bones of buffaloes being found in this valley, and this confirms a statement made in Cabrilo's voyage of 1542, who when he anchored in front of Saticoy Valley was told by the Indians that people lived to the eastward of them who

had cows and planted maize. The discoverer of California found the Indians of this vicinity much smarter than anywhere along the coast. Near the mouth of the Saticoy River are two immense smooth mounds, called by the Indians Tosalaloo and Mosolollo, over a mile long.

There is another trace of this ancient Indian population in a curious roadway which leads from the mouth of the Coahuila Valley of San Gorgonio Pass across the desert country, for over one hundred and forty miles, in nearly a straight easterly line, to the mouth of the Big Cañon of the Colorado River. All along this pathway, which is worn deep into the earth and soft rocks, the ground is covered thickly with broken unglazed pottery, supposed to be the remains of water vessels used by the ancient Indians. The present Indians know nothing of those who made this highway, which ends near Noble's rancho of San Gorgonio Pass, or Valley of the Coahuilas.

The roadway is not much over a foot broad, and what is very curious, it has in many of the rocks the distinct impression of human feet and of animals. It is worn into the soil several inches, and is very ancient, and still perfectly preserved in all its parts, as our informant related to us. By-paths lead from it in straight lines to off-lying water holes and springs, which are all surrounded with broken pottery.

It is well known that the present Indians living in the little valleys of the eastern slopes of the San Bernardino Mountains, in San Diego and San Bernardino counties, who number several thousands, and are mostly the neophytes of the southern missions, and *generally* speaking Spanish, have a tradition from their grandfathers that the Colorado desert was once thickly settled, and never in want of water, and well cultivated in many parts. These Indians still cultivate the ground and raise grain, cattle, sheep, horses, &c., and even make woolen blankets, as many of the Colorado tribes have done for many years back, some of which were of a superior quality, and which we have ourselves seen. These blankets are similar to the Navajo Zuni serapes, and can easily hold water.

In 1853 there were given out in the California papers great stories of the discovery of an immense pyramid and an extensive stone bridge being found in the eastern or Colorado parts of San Diego, Los Angeles or San Bernardino counties. The story was supposed to have been got up by some gold-mining hunters, or emigrants, sons of the father of lies, and descendants of the anathematized Mendoza, and was consequently disbelieved by Californians, who are not easily deceived either by politicians or gambusinos. Nor ought they to be, if ten millions of public debts, or Fraser River, or Gold Lake are proofs of their sagacity. If they had not have doubted no one would have found gold at Caribou or Salmon River, nor will ever any one find the gold-bullet country of Aubrey, nor the great pyramid and stone bridge, nor the capital of the ancient kings of California, which is still supposed to exist in some secret valley inside the dry mountains between the headwaters of the Rio Salado and Bill Williams's fork of the Colorado—a very *terra incognita*—by tradition of Jesuits and Indians, full of silver, gold and mercury, and waiting to immortalize some new discoverer, whose paths diverge from the field of Mars.

The *mounds* of Tosalaico and Mescaltia, referred to as existing near the mouth of the Sacaty River, are strange looking objects, and as they are in the midst of a flat plain of great extent, running down to the ocean some six miles off, they suggest the idea which some of the old Indians are said to entertain of an ancient burial-place, probably of some of the sea kings of California, whose cities are now sunk under the neighboring channel of Santa Barbara. The high-road runs between them, and they are some two hundred feet high—smooth, rounded, and entirely bare of trees. But they may be only one of the caprices of Mother Nature. The smaller mounds near the ancient irrigated fields of Cayatano are twenty miles up the valley, which has an exceedingly fertile soil in the bottoms: the whole country opens to the ocean in an immense plain twenty miles along the sea-shore, backed by high ranges of mountains. These smaller mounds are only five or six feet high,

by about ten feet long; they are at the western end of the *acequias*, and seem to have been water-worn or worked out, by running water all around the mounds, so as to isolate each one, of which there are ten or twelve in number.

ALEXANDER S. TAYLOR,
in *San Francisco Bulletin*, 1862.

NEVADA.

THE mighty tide of empire dashed
Upon a continent's bold strand,
And, rolling back, its billows washed
And fertilized a desert land.

They came—the founders of a State,
The men with spirit brave and free,
Who snatched the magic wand of Fate
And shaped their own high destiny.

They smote with it the barren rock,
A silver tide was disentombed;
The mountains sank beneath the shock,
And arid valleys rose and bloomed.

In cañon, desert, plain, and glade,
On mountains towering to the skies,
The broad foundations have been laid
On which our noble State shall rise.

Proud may we be, whom God selects
As trusty instruments of fate,
Proud may we be, the architects
Who rear the pillars of a State.

The humblest laborers who toil
Within the tunnels damp and murk,
Are clothed with majesty the while
They aid this grand creative work.

Though poor, the legacy they leave
The gift of wealth or rank exceeds—
This proudest boast their souls shall have
A heritage of noble deeds.

Then, lend a stout and willing hand,
And let the stately structure tower,
With its proportions fair and grand,
As reared by superhuman power.

So fair, so grand, that we with pride
Shall list while generous tongues relate—
Where met the East and Western tide
Was formed at last a perfect State!

JOSEPH T. GOODMAN,
in the *Virginia (Nev.) Territorial Enterprise.*

SANTA ANNA.—SKETCH OF HIS REMARKABLE CAREER.

ANTONIO LOPEZ DE SANTA ANNA, ex-President and Dictator of Mexico, has passed a remarkable career, and is a remarkable character. He was born in Jalapa, February 21, 1798. He first came into public notice in 1821, in the Mexican war of independence; and in 1822, having expelled the royalists from Vera Cruz, he was appointed to the command of that city. In November of that year, he was deposed by Yturbide, who had proclaimed himself Emperor; but Santa Anna refused to submit to his authority, raised the banner of the republic in Vera Cruz, and in 1823 succeeded in compassing Yturbide's downfall. In the changes which quickly followed, he placed himself at the head of the federal party, but was defeated, and retired to his estate at Jalapa. In 1828, he took the field against the government of Pedraza, chosen to the presidency by an electoral majority of two, declaring the election of Guerrero valid; and after a series of engagements retired to

Oajaca. The command of the forces against the Spanish expedition under Barradas, was intrusted to him; and embarking at Vera Cruz, he forced Barradas to capitulate at Tampico, September 11, 1829. Guerrero made him Minister of War and Commander-in-Chief of the army, but, continuing afterward to exercise the dictatorial powers with which he had been invested to repel the invasion, Santa Anna combined with Bustamente to overthrow him, and the latter was made President by the army. In January, 1832, however, Santa Anna headed a new insurrection, declaring for his former opponent, Pedraza, whose triumph he insured by a victory over the government troops, in October of that year. Being himself chosen President in March, 1833, he had to confront a popular insurrection under Arista and Don Gabriel Duran, but speedily subdued it. He now left the party of the federalists, and put himself at the head of the centralists, who wished the power concentrated in the executive government. Though a favorite with the army, which desired him to be made Dictator, he was unpopular with the nation, especially as a rumor was spreading that he aimed at the imperial dignity. A new revolt broke out in four provinces, and a manifesto was issued at Texca against his government. On May 11, 1835, he utterly defeated the army of the insurgents, on the plains of Guadalupe, near Zacatecas, killing two thousand, and taking two thousand seven hundred prisoners. This was a fatal blow to the republican party in Mexico, and Santa Anna was named Dictator. The destruction of the federal constitution was soon consummated; the State Legislatures were abolished, their places being supplied by a departmental council, and the governors of the several States became dependent upon the supreme power. Mexico was submissive, but a revolutionary feeling had been long existing in Texas, which now broke out into open insurrection. Early in 1836, Santa Anna took the field in person. By the middle of February, he reached the Rio Grande, at the head of six thousand troops, stormed the Alamo at San Antonio, on March 6, after several days' siege, and massacred its defenders, but with great loss to himself, and after the mas-

sacre at Goliad, done under his express orders, marched toward Gonzales. At San Jacinto, he met the Texan army, under Houston, by whom he was totally routed, April 21, and the day following taken prisoner. During his captivity he made a treaty with the Texans, which resulted in nothing, as his functions were suspended by the Mexican government. In 1837, he was set at liberty, and returned to his native country, by way of the United States. On reaching Vera Cruz, he was coldly received. At the Presidential election of that year, he received but two out of sixty-nine electoral votes. He had retired to his estate, twenty-seven miles from Vera Cruz, when (November 27) the castle of San Juan de Ulloa was bombarded by the French. He hastened to Vera Cruz, where his services were accepted by General Victoria, and took command after the fall of the castle. He repelled an assault upon that city by the French (December 5), forcing them to re-embark, but received a wound in the leg, which necessitated its amputation. In the contentions between the centralists and federalists, which during the following years distracted Mexico, he was one of the leaders of the former; and from October 10, 1841, to June 4, 1844, he was virtual Dictator, under the title of Provisional President, Bravo and Canalizo acting as his substitutes during two intervals of absence with the army. He was again Constitutional President, under the instrument of June 12, 1843, from June 4 to September 20, 1844, when he was deposed by a new revolution, taken prisoner near Tlacolula, on January 15, 1845, banished for ten years, and took up his residence in Cuba. The two succeeding Presidents, Herrera and Paredes, found themselves unable to grapple with the difficulties under which the country was laboring, aggravated as they were by the war just breaking out with the United States. Santa Anna was recalled, and by the connivance of the American Government, which, for reasons that have never been made known, supposed him favorable to peace and recognizing the independence of Texas, he was permitted to pass through the fleet and reach Mexico in safety. There, contrary to the opinion entertained in the United States, he declared vigorously for the war, and was

appointed generalissimo by the provisional government under Salas, and in December was made Provisional President. Immediately after, at the head of twenty thousand men, the flower of the Mexican army, he advanced northward, and on February 22, 1847, attacked the American troops at Buena Vista, five thousand strong, under General Taylor. He was effectually repulsed, but nevertheless maintained his reputation and popularity, and collected a new army for the defense of the eastern frontier. In the mean time Anaya was elected President, and Santa Anna, taking command of his troops, intrenched himself at Cerro Gordo, where, on April 18, he was attacked and defeated by the Americans under Scott. Yet in spite of these disasters, he was enabled to collect three thousand men from the fragments of his broken army, and, retreating toward the national capital, halted at Ayutla. There he was informed of his appointment to the Presidency, as it was felt by the Mexicans, amid all their disheartening reverses, that he was the only man who could make head against the Americans with any prospect of success. But finding subsequently that the election for President which the States had held on May 15, was unfavorable to his pretensions, he prevailed on Congress to postpone the counting of votes until January, 1848, and in the mean time banished or imprisoned all those opposing his schemes, and established a severe censorship of the press. During the course of the year he carried on secret negotiations with Scott, and Trist, the American commissioner, with questionable sincerity, and certainly with no result. He organized an army of thirty thousand men for the defense of the capital. The battles of Contreras and Churubusco followed (August 19 and 20, 1847), and the next day an armistice, proposed by General Scott, was accepted by him, which suspended hostilities till September 8. The battle of Molinos del Rey was fought September 9; and on September 16, 1847, the City of Mexico was captured, having previously been evacuated by the officers of the government. Santa Anna now resigned the executive chair to Peña y Peña, who had been constitutionally elected his successor, and, though he despaired of successfully resisting

the party of peace in Mexico, he made a last effort to retrieve his reputation by the siege of Puebla; but he was attacked by General Lane at Huamantla, and forced to retire from the place, which was now relieved. In the middle of January, 1848, an attempt was made to surprise him at Tehuacan, where he was lurking, but failed; and about February 1, Santa Anna informed the Minister of War, and the American Commander-in-Chief, that he desired to leave Mexico, and "seek an asylum on a foreign soil, where he might pass his last days in that tranquillity which he could never find in the land of his birth." The desired permission was granted, and on April 5, 1848, he took passage from La Antigua to Jamaica. In that island he remained several years; but the anarchical condition of Mexico under the Presidencies of Herrera and Arista turned men's eyes once more upon him, and returning to Mexico in 1853, he was received with great enthusiasm. He was appointed President for one year, after which time he was to call a constituent Congress; but he fomented a new revolution by which he was declared President for life, with power to appoint his successor, and the title of Most Serene Highness. He began to rule with despotic authority, and the revolution of Ayutla followed, led by General Alvarez. After a struggle of two years, Santa Anna, finding himself without resources, since he had spent the ten millions of the Gadsden treaty, signed his unconditional abdication, and sailed (August 16, 1855) from Vera Cruz for Havana. He afterward went to Turbaco, Venezuela, for two years, and has since resided in the island of St. Thomas. On the advent of Maximilian in Mexico, he embraced the cause of the usurper, believing, as he declared, that Maximilian could restore peace to the country. He was disappointed, however, in his hopes, and perhaps his expectations; for he soon abandoned Mexico and the cause, and returned to St. Thomas. Here he has since resided.—*N. Y. Herald*, May 14, 1866.

"DEATH VALLEY."

THIS valley is some fifty miles long by thirty in breadth, and, save at two points, it is wholly encircled by mountains, up whose steep sides it is impossible for any but expert climbers to ascend. It is devoid of vegetation and the shadows of bird or wild beast never darkened its white glaring sand. In the early days, trains of emigrants bound for California passed, under the direction of guides, to the south of Death Valley, by what is known as the "old Mormon road." In the year 1850, a large train, with some three hundred emigrants, mostly from Illinois and Missouri, came from Salt Lake, guided by a Mormon. When near Death Valley, a dissent broke out in a part of the train, and twenty-one families came to the conclusion that the Mormon knew nothing about the country; so they appointed one of their number a leader, and broke off from the main party. This leader determined to turn due west; so with the people and wagons and flocks he traveled for three days, and then descended into the broad valley, whose treacherous mirage promised water. They reached the center, but only the white glaring sand, bound by the scorched peaks, met their gaze on every hand. Around the valley they wandered, and one by one the men died and the panting flocks stretched themselves in death under the hot sun. Then the children, crying for water, died at their mothers' breasts, and with swollen tongues and burning vitals, the mothers followed. Wagon after wagon was abandoned, and strong men tottered and raved and died. After a week's wandering, a dozen survivors found some water in the hollow of a rock in the mountains. It lasted but a short time, then all perished but two, who, through some miraculous means, got out of the valley and followed the trail of their former companions. Eighty-seven persons, with hundreds of animals, perished in this fearful place, and since then the name of Death Valley has been applied to it. Mr. Spears says that when he visited it last winter,

after the lapse of eighteen years, he found the wagons still complete, the iron works and the tires bright, and the shriveled skeletons lying in many places side by side.—*S. F. Golden City*, June 28, 1868.

GEOLOGY OF THE GLOBE.

IN treating of the distribution of the different rocks covering the face of the globe, I shall divide the world into six portions. In the North there are North America, Europe, and Asia; and in the South, South America, Africa, and Australasia.

I. *North America.*—The first land which appeared in North America was Russian America, at Behring's Straits, with a narrow strip running south to the Straits of Panama, the whole being silurian rock, which formed the west coast. On the east coast there is Labrador, Canada, and Greenland, and a narrow strip running south to Virginia, which is likewise composed of silurian rock. These beginnings of North America form two long islands. The waters recede—caused by so large a discharge of solid matter from the ocean (the two islands just named)—when the Devonian and carboniferous rocks of the Hudson's Bay and the United States make their appearance, which forms another island, midway between the two previously named. The waters again recede, and the oolite and chalk of the Mississippi valley are produced. This addition converts the three islands into two, which are now only separated by a narrow sea. The water once more subsides, when the London clay formation comes to light, which unites the two islands and completes the formation of the North American continent. A considerable extent of London clay is at the same time added to the shores of the Gulf of Mexico. The valley of the Mississippi, as far up as Red River, is, however, alluvial, formed by the soil carried down by the Mississippi and Missouri. The elevation of the older rocks being always greater than those which follow them, it is very

evident that the formation of dry land and the appearance of new rocks has been caused, not by the upheaving of the land, but by the subsidence of the waters. The solidification of the water by the creation of rocks, and the consequent reduction of the temperature, could not fail to reduce the water level. In modern times there are almost no traces of this action going on, but neither are there any visible traces of new rocks being formed, and without the one we can not have the other.

II. *Europe.*—Europe began with a large island in the North, comprising Norway, Sweden, Lapland, and Finland, with a number of small islands dotted over the area now occupied by the various countries of Europe. The water having receded, the Devonian and carboniferous rocks are added. The water again subsides, and the oolite and chalk make their appearance. The sea having been again reduced, the London clay makes its appearance, when all Europe, including Great Britain, is united and formed into one continent. The deluge, which caused the northern drift, now makes its appearance, and detaches England from the continent.

III. *Asia.*—The northern and western coasts of Asia being silurian, that would form one vast island, detached from Europe, in the form of a crescent, beginning with Siberia and Russian America, and ending with Malacca and Hindostan. The sea recedes, and large patches of Devonian and carboniferous rocks are added. The water having again fallen, the oolite and chalk appear in China, Thibet, and Arabia. The sea is again reduced, and a vast field of London clay is laid dry, which connects Europe with Asia. The deposit forms Western Siberia and the deserts of Central Asia and Arabia. The northern part of Siberia is formed of drift or alluvial, which has either been caused by the deluge or carried down by the great rivers running north, or partly from both causes. The deluge appears to have cut through Behring's Straits, and separated the old world from the new. The rocks on both sides of Behring's Straits being low, and of the same description, there is every indication that this was so; and when we find the Mongolian

race inhabiting the north on both continents to this day, this theory is pretty well established.

The Arctic Ocean was probably at one time a lake, surrounded on all sides by land. This lake in the early ages would be entirely free from frost, snow, or ice, for then the temperature was much higher than it is now, of which the fossils of tropical animals found in Lapland are proof. Suppose that temperature was 156° at the tropics at the period of the London clay, and there was a general fall of temperature of one-half, that would leave a temperature of 78° for Lapland and Greenland. In this state of the world, this great Arctic sea or lake overflows, or is visited by a tornado or convulsion of nature. The waters burst through the barriers of land that confine them at Bhering's Straits, Baffin's Bay, and Spitzbergen, which flood the whole world, and the drifting matter found in all parts of the globe testifies to the extent and fatal results of this fearful catastrophe.

IV. *South America.*—This continent began with three great islands, the first forming the western coast from Panama to Cape Horn, the second forming nearly the whole of the Brazils, and the third forming the northern coast—all being composed of silurian rocks. The sea having receded, patches of Devonian and carboniferous rocks are added to the dry land. The water again subsides, when a vast extent of London clay is left dry, which connects the islands, and completes the formation of South America. The alluvial formation is here very extensive, formed by the soil washed down by the Amazon and the La Plata.

V. *Africa.*—This vast continent began with one great island, forming the southern half of Africa and the western shores of the Red Sea. Patches of carboniferous rocks are next added. The sea having receded, a strip of oolite and chalk appears along the shores of the Mediterranean, which forms a second island. The waters again subside, and a vast deposit of London clay, forming the great desert of Sahara, completes the formation of the African continent.

VI. *Australasia.*—The great island of Australia began with an island in the form of a crescent, composed of silurian rocks. At the same time, the islands of New

Guinea, Borneo, Tasmania, and New Zealand were formed, which are likewise Silurian. The waters having receded, strips of carboniferous rocks appear on the eastern coast of Australia, and in most of the other islands. The coasts are next skirted with oolite and chalk, left bare by the receding of the waters. The ocean having again subsided, the center of Australia, which is London clay, becomes dry land, when the island continent, as it now exists, is completed.

There is a great want of land in the south compared with the north. Land appeared first in quantity in the north, which impeded the natural flow of the ocean in that region. It was different with the south, where there was comparatively little land, and where the currents pursued their course with little interruption. The peculiar shape of the land in the south, with pointed ends turning southward, as in the case of South America, Africa, Arabia, Hindostan, and Malacca, indicate a flow of water to the north, which had washed away the land and left the continents the shape they now are. While the northern drift sent the water from the north to the south there would of necessity be a counter current from the south to the north, and while there are indications of the one current in the north, there are equally strong indications of the other current in the south, as has been already explained. When additions of new land are made, new deposits of rocks now unknown will cover the land. We have been gauging the waters of the Atlantic, and if we could bore down a few hundred fathoms in the bottom of the sea we should know what these new rocks are. The following table gives the probable quantities of the different rocks covering the six portions into which I have divided the globe. The figures represent millions of square miles :—

	Silurian.	Carboniferous.	New Red and Chalk.	London Clay.	Drift and Alluvial.	Trap.	Total.
North America	3	2	½	1	¼	¼	7
Europe	1¼	1	¼	½	¼	¼	4
Asia	3½	3	1	4½	4	½	16½
South America	2½	½	¼	2	1	¼	6½
Africa	6	½	¼	5	½	¼	12½
Australasia	1¼	½	¼	1	¼	½	3¾
Total	17½	7½	3	14	6¼	2	50¼

It will be observed from the above estimate that there are more silurian rocks on the face of the earth than other—viz., 17,500,000 square miles; London clay coming next, which extends to 14,000,000 miles. Of Devonian and carboniferous rocks there are 7,500,000; of trap and granite, 2,000,000; and of drift and alluvial, 6,250,000. The vast extent of the London clay points to this period, or rather the one immediately preceding it, as the age of the earth when the absorption of the waters, and the consequent reduction of the temperature, went on most rapidly, for we may always measure the fall of the water level by the extent of the land uncovered.

The generally received theory of the drift is that the Arctic Sea was frozen at the time of the London clay. The ice was broken up by some convulsions of nature, which drifted enormous icebergs over the whole world, carrying on their backs huge masses of soil and rock. That such an improbable theory should have gained ground among scientific men only shows the want of some better theory to account for the facts of the case. There is no want of evidence to show that the Arctic Sea could not have been frozen over at the time of the drift; and it is equally impossible to conceive how the icebergs could have been loaded with soil and rock, as they are said to have been.

The theory of the drift which I have ventured to propose, is, in my opinion, a very probable one. One-half of Siberia consists of drift and alluvial, not confined merely to the estuaries of the rivers, but stretching along the coast from the White Sea to Kamschatka, a distance of many thousand miles. This enormous mass of drifted matter indicates a vast accumulation, caused by the influx of the rivers running north on the one hand, and the pent-up waters of the Arctic Sea on the other. Should a new exploring expedition be sent to the North Pole, it would be well to take this new theory into consideration, and to furnish any facts that may be gathered tending to elucidate the matter.

Such is a general estimate of the structure of the earth, and how the dry land emerged from the bosom of the waters.—*Unionville, Nevada, Humboldt Register.*

JESUITS IN SPANISH AMERICA.—THEIR EXPULSION FROM THE CALIFORNIAS, 1767.

IT is a century ago. Who can realize it? Could any Californian embody the thought while witnessing, at Santa Clara, in June, 1867, the examination of the students of the great college of that religious fraternity, which many Roman Catholics affirm is the "right hand of the Church," that their predecessors were ignominiously expelled one hundred years ago from the Californias, and forbid ever to set foot again in the American dominions of the King of Spain.

THE RISE AND EXTENSION OF THE JESUIT COMMONWEALTH.

Thus came about this mighty event in the religious and political peripheries of the family of man. The Jesuits, since the year 1550, had explored every portion of the New World (save the ancient Alta California), from the frontiers of Auracania to the frozen wilds of Labrador—from the lines of the Atlantic to the boundless horizons of the South Seas. In the *pampas* of La Plata, among the *selvas* of Paraguay, in the interminable forests of Brazil, among the beautiful dells and glades and *vegas* of Chili, of Peru, of Quito, of New Granada, of Venezuela, in the very heart of the Andes, within the most lovely valleys and temperate lands of Central America and Mexico; throughout the islands of the Carribean Antilles; from the gates of the Mississippi to the great lakes of New France, where the mighty St. Lawrence fountains its floods, to the Gulf of Newfoundland, lived these men among the children of the Aztecs and the Tzendals and the Incas, brooding over the fall of their ancient empires and traditions; having gone forth from the haunts of European civilizations, with an irrevocable vow to conquer the races of men to the dominion of Christ—to fix their faith to the Church of Rome—to make all know that St. Peter was keeper of the doors of heaven;

on this rock do "I build my Church, nor shall the gates of hell prevail." In every country of Europe: in Egypt, in Syria, in Abyssinia, in Persia, in Chaldea, in Armenia; in the boundless steppes of Tartary and the rugged fronts of the Caucasus; in the deserts of Arabia, in the humid, heated plains of Bengal; among the nations of the Carnatic, the Malabar, and the Coromandel; the super-refined Gentiles of the Oriental Illuminati, glorying in the fabrications of magic and enchantery, and dwelling among the splendid ruins of the old sultans and rajahs, in the imperium of the Great Mogul; all through populous, crowding, million-peopled China, to the very throne of the Mantchoos at Pekin, they bore the Banner of the Cross!

THEY FOUND COLLEGES, LIBRARIES, AND CONVENTS.

In most of the powerful States and Kingdoms of Continental Europe they founded Colleges, which became the mother seats of letters and science, and to this day these institutions, secularized to the Governments after their expulsion before 1767, are still the great centers of learning and of immense collections of books and instruments of philosophic demonstration. Many of the sons of kings and princes, and thousands of the first families of Europe, with multitudes of those of the less wealthy and of the middle classes, joined the Order and went forth year after year into every land, country, and people under the sun, as teachers or missionaries or lay brethren, to capture human souls; to build up the houses, the churches, the parishes, the convents, or the colleges of the company; to lay down their lives as martyrs or as civilizers of pagan nations or of savage tribes, or instructors of Christian youth, or professors in learned universities, or priests to serve the humblest parish church in Christendom, or as confessors to kings, queens, princes, nobles, or statesmen. They built the most splendid churches in Europe and filled them with the choicest *morceaux* of art; and innumerable were the "monsters of erudition" which the sons of Ignatius gave to the learned world in theology, philosophy, languages,

science, *belles lettres*, history, archæology, travels, and geography.

GREAT DICTIONARY MAKERS.

Throughout all Spanish and French America they established hundreds of missions among the Indian tribes, and in Mexico, New Granada, Quito, and Peru were the founders of universities, colleges, and libraries, and they reduced to grammatical rules not less than fifty different idioms of the aboriginal tribes of the Americas, some of which were the results of life-labor, and are monuments of acute research, industry, and learned zeal, and are in constant use to this day in letters and common life.

THE HISTORIANS OF THE NATIONS.

The histories and explorations of the barbarous or conquered countries of the New World, which the Jesuits compiled, attest the industry, the zeal, and the intelligence of the fraternity; and it may be truly said, if these works had perished, there would be no true foundation for the history of one half of America. The immense numbers of philological and historical volumes on China, India, Japan, Western Asia, and Eastern Europe compiled by the members of this religious corporation is one of the most wonderful features of modern letters, and has drawn forth the plaudits of the most bitter of their enemies and the deepest regrets from high-minded philosophers that this great body of literary monks and scribes should have been plundered by princes and people to such poverty and destruction. To give a better idea of what the Jesuits have done in the republic of letters, ten years ago a French author made a bibliographical catalogue of their writings, which filled four or five large octavos. A highly interesting account of their missionary labors in English America before 1750 was written by no less a personage than the excellent bishop of the Protestant Episcopal Church of California, to whom the Jesuits are indebted for much honorable and Christian courtesy.

THEIR MISSIONS AND COLLEGES IN THE AMERICAS.

In Mexico, Guatemala, Venezuela, Ecuador, Peru, Bolivia, and Chili, and particularly Paraguay, they established an immense number of missions among the Indian tribes, and, after long years of laborious perseverance, brought hundreds of thousands of them into the habits of orderly, civilized life, and greatly extended and confirmed the power of Spain, and even made Christian republics in Paraguay and California. In all the chief towns of these remote countries they erected elegantly constructed and beautiful churches, built many of them in the highest style of art, which, to this day, call forth the admiration of the traveler. In Bogota, in Mexico, Pueblo, Guadalajara, Guatemala. Quito, Lima, Cuzco, La Paz of Bolivia, Cordova, and Buenos Ayres of La Plata, and in Santiago they erected colleges which speedily attained the highest status in Spanish America, from the numbers of eminent scholars with which they filled the chairs of the professorships, combined with large libraries of books, procured from all parts of America and Europe, and attracting crowds of the youth of the first families of the wealthy Creoles of the New World. Thus it was that the marvelous green bay-tree of the Society of Jesus struck its roots deep into the earth and grew to a lofty height, and spread far and wide its umbrageous arms, so that all races of men rested under its shadow, and wondered at the power, diligence, and ubiquity of the sons of Loyola. In the year 1760, the Jesuits are, by some writers, stated to have numbered, in Spanish America, 7,000 persons, lay and sacerdotal, over 3,000 of whom were in New Spain and Guatemala, many of them natives of the New World, for an inexorable rule of democratic equality prevailed from Rome to California, and every man, from the richest to the poorest, went through one mill and found his exact level, according to natural merit. Their own writers affirm, as well as their enemies, that the sons of princes or nobles served as gardeners or cooks, or those of farmers and peasants sat in the chairs of professors or the heads of

houses. The order accumulated in the Spanish colonies an immense amount of wealth, but it was all concentrated in churches, convents, libraries, colleges, and mission buildings, with landed properties as haciendas and gardens, which last were managed by lay brethren, to give rentals for the maintenance of the priests, professors, and missionaries, and provision for the poor.

IMMENSE INFLUENCE IN SPANISH AMERICA.

The society thus attained an immense popularity among the middling and humbler classes of people, and the *Black Coats* were the most popular of men among the down-trodden Indian races. They went unharmed among the most savage and barbarous tribes, where no other Spaniard dared to set his foot. The priests and professors in Spanish America were the most esteemed and welcome of all the Catholic clergy, among the rich and the poor; and the society, as well as other Spanish writers, assert that their lives were eminently virtuous, pure, and honorable, and according to the highest standard laid down by the Fathers of the Latin Church. After awhile, from the high-bred courtesy, patience, and persistent attention of the teachers to the development of the characteristic abilities of their pupils, no young man's education in the American colonies was considered complete until he had passed through their schools, and great numbers of their Creole students joined the Order, and became famous scholars in *belles-lettres*, theology, and history.

THE WAR ON THE JESUITS.—THEIR RESIGNATION.

All this wonderful prosperity, power, and influence could not exist without exciting enmity, jealousy, suspicion, and, finally, the fiercest opposition and cunningest combinations of intrigue. Satan, the enemy of man, ever plotting the abasement and destruction of the Church, says the old Jesuit chronicler of California, could not see so many souls redeemed from perdition without revolting against these sacred invasions of his unholy diminion. "You are very

astute, you gentle shepherds of the simple flocks," said the philosophers and the Voltarian Spaniards. "You like to sit in soft places, and know how to feather your nests; you invade the courts of kings and juggle for the consciences of the ignorant; you are too good for this world, and such are not to be trusted by those who know two from four. Your sleek black coats and catecornered skull-caps cover deep heads and black hearts. We'll watch you and scotch you." Then commenced an uproar, and a determined fight in every family and every circle in the Catholic world from the highest to the lowest; and, after a long and bitter struggle, they became the "bottom dog," and the enemies of the Jesuits triumphed.

The Jesuits were driven from city to city; they were abhorred outcasts in Portugal, in France, in Naples, in Germany, and, finally, in the domains of Spain, in all of which they had been the honored of the honored, their last and only refuge being the States of the Papal See. "God, in his mysterious wisdom, hath allowed the enemy of man to prevail for a season," says the ancient Jesuit author; "our calumniators, and even those of the household of faith, hath overcome us in the conflict. We are chastised for our innumerable sins, and bow to the hand that smites. We can now realize the words of our Founder, that good fortune is never to be trusted, and that we have most to fear when things go according to our own desires. Christ is the Master of souls, and we are his ministers, and but sojourners on earth to that country where God reigns all in all. A. M. D. G."

ORDER FOR THEIR EXPULSION FROM SPANISH AMERICA.—THEY LEAVE FOR CALIFORNIA.

In June, 1767, the decree of Charles III., of April 3, 1767, countersigned by their confirmed enemy, the Minister Aranda, arrived in Mexico, and other parts of Spanish America, for the expulsion of the Jesuits; and, in the course of the ensuing months, some 7,000 are said to have been taken in Spanish vessels to the Pope's dominions from

different ports of the colonies of Spain. This decree was pitilessly executed throughout New Spain on the 25th day of June, and the entire property of the Order, amounting to over $11,000,000, as stated by some Mexican writers, was confiscated to the Crown, and every Jesuit marched to Vera Cruz. From many delays, by dangers on sea and land, this mandate was not accomplished in Peninsular California until the end of November following (1767), when Capt. Gaspar de Portolo arrived in the country with a commission from the Viceroy de Croix, as Governor of the Province, accompanied by fifty soldiers to enforce his orders. This was the same military officer who became (in 1769) the first Governor of New California, or California Felix, and chief of the expedition of exploration, in company with Padre Junipero Serra, which discovered in that year the Bay of San Francisco, and the route to the same by land from San Diego.

Portolo arrived at Loretto and immediately summoned Father Ducrue, Superior of the Mission, to deliver up their establishments and the effects of the Company into their hands. To this Ducrue, a venerable old man who had resided long years in the country, responded that his Majesty's commands should be obeyed with every respect and promptitude. On receiving the order every missionary Father promptly put himself on the road for the appointed destination, which was Loretto, where, to the number of sixteen, they arrived, each with a small wallet of clothing, and, as Clavijero says, having all the rest of his personal property comprised in "a book of devotions, one of theology and one of history." Some of them traveled through five hundred miles of uninhabited, sultry, barren, cactus-covered land, from the outposts near the head of the Gulf, yet they all arrived safe.

GRIEF OF THE INDIANS.—THE HOMEWARD VOYAGE.

Then went up a wail from the simple Indian neophytes, such as the rugged and solitary wastes of California Petræ had never before echoed, and at sixteen different Mission

towns—from José del Cabo to near the mouth of the Colorado —7,000 of the red men fell down on their knees and begged the venerated black coats not to desert the soil; not to leave their children unprotected from the demons roaming in Pagandom. That could not be, said the faithful pastors; the King and Sovereign and Father of the land, on whose dominion the sun shone every hour from its rise to its setting, and so continued till it rose again, day by day, had directed them to forever depart from the land, and the Great Monarch would send them other care-takers, who must be obeyed as their children obeyed them.

THE FOUNDERS OF CALIFORNIA PETRÆ AND ARIZONA.

Several of the Fathers were venerable, gray-haired men, and had known since 1710 the younger companions who had with such unwearied zeal and courage assisted in founding the first Missions of La Paz, Loretto, and San Ignacio, under those ever-to-be-remembered names of Kino, Salvaterra, Ugarte, Taraval and Piccoli, the apostles and frontiersmen of the *ultima thule* of the settlement of Christendom. The Roman Catholics of the domains and commonwealths made out of ancient California, can ever affirm with honest pride that the land was cleared and the road made smooth for all comers thereafter, by pioneers of the most irreproachable character; noble-hearted, learned, and pious Christian gentlemen, who forsook titles and honors to serve the Redeemer of men, and build up the waste places among the miserable solitudes and cañons of godless California. Sixteen of these devout men left their bones in old California, while a like number were hurried on board a small leaky vessel which bore them, on the 3d of February, 1768, to the pestiferous port of San Blas, from whence they were taken overland to Vera Cruz and deported to Spain. In Spain none of the expelled Jesuits from the colonies were allowed to debark, but forced to continue their voyage, and were landed in crowds, after much suffering and numerous deaths, mostly in the Papal States. In this territory and in Venice and Bavaria, they were allowed to enter existing institutions of the Society, and before the

suppression of the Order by the Pope and the conquest of Italy by Napoleon, the Jesuits from Spanish America compiled large numbers of most valuable works of history on all parts of the New World, often quoted in the columns of the *Bulletin*, and which are to this day in highest esteem in the republic of letters; among these are the volumes relating to California and Arizona, written by De Hervas, Clavijero, Del Barco, Alegre, Begert, Steffel and Pfefferkorn.

WHAT THEY DID IN ARIZONA AND UPPER AND LOWER CALIFORNIA.

At the time the Jesuits left Baja California they had just established the frontier Missions of Santa Maria and San Francisco Borgas, a short distance above the parallel of Cedros Island, with the ultimate design of continuing a line of Missions over to the Colorado to connect with their outposts in South Arizona, then called *Alta Primaria*, and also to carry them up the northern coast as far as Monterey Bay, which last was intended as a port for the Manila galleons, and to open the trade with China. Their Missions in 1767 in the Peninsula numbered fourteen, commencing with San José del Cabo and ending at Santa Maria, some twelve leagues east of the Bay of Los Angeles on the Gulf, and their Indian neophytes amounted to about 7,000 souls. They also had three or four Missions in South Arizona, and some twenty others in Sonora, some of them founded before 1630, all of which, including those of Lower California, were given up to the Franciscans. In 1856 an old Mexican woman died at Monterey, over one hundred years of age, who once informed us that she was a *donzela* of eleven the day when the Jesuit Fathers left the city of Mexico, and on that eventful day one of the most destructive storms visited the capital the people ever heard of, a fact vastly improved by the friends of *La Sagrada Compania*, who were not only numerous but among the wealthiest and most devout in the Viceroyalty—particularly those of th ehigh families of the Creoles and Indians.

THE FOUNDER OF THE JESUITS.—THEY BEGIN WHEN ALTA CALIFORNIA WAS DISCOVERED.

Ignatius Loyola, the founder of the Society of Jesus, was born in 1491, in the province of Biscay, during the time Columbus was in Spain entreating Ferdinand and Isabella to discover the New World, and was the son of one of the oldest families among the Grandees of that monarchy and which is still flourishing in the Vascongada. Passing from the turbulent life of a soldier, his whole existence became changed, and he was made a priest in 1537. In 1540, the Order was established by Pope Paul III., and in 1541 Ignatius Loyola was made the first General of this famous maternity of Sacerdotals. These facts occurred in the two years when Viceroy Mendoza was forwarding the explorations of New Mexico under Coronado, and who ordered the expedition of Rodriquez Cabrillo to the northern seas, which resulted in 1541, in the first discovery of the coasts of the State of California, and at the time of the conquest of Peru and before Cortes or Pizarro died. Loyola, eminently the friend of the poor and ignorant, after seeing his Order establish over one hundred colleges, and flourishing in every country of Europe, battling with thundering force and effect against the spread of this Protestant Reformation, and extending into India, China, Japan, and America, died at Rome, on the 31st July, 1556, at the age of sixty-five, and lies buried at the celebrated church known in our days as *Il Giesu*, or of Jesus, and esteemed as next to Saint Peter's in architecture and the treasures of Italian art. In 1622, or sixty-six years after his death, he was canonized as a saint by Pope Gregory XV., and has ever been held by the Roman Church as one of the mightiest of its spiritual warriors, and in the world of letters his fame is as co-extensive as that of Columbus, Napoleon, Cortez, Washington, or any other of the prominent actors in the human drama since the foundation of the art of printing or the discovery of the Western Hemisphere.

THEIR FRIENDS AND ENEMIES.—NO IMPARTIAL ACCOUNT OF THEIR HISTORY KNOWN.

Libraries of volumes have been written *pro* and *con* touching the Company of Jesus. By their enemies, who are among the most celebrated names in politics and letters, Catholic and anti-Catholic, they are numbered among the greatest foes to human rights, public liberties, or the progress of man. The books of their friends are too generally filled with vapid flatteries and compliments, and there exists no dispassionate work containing an intelligent account of the operations and history of the Order throughout the world from its foundation to the present day. Strange to say no Jesuit writer has yet given a full and detailed account of their Society in the two Americas for the same space of time; nearly all their chronicles are old, partial, local, and generally any thing but full and complete. Among the best of their works of history on Spanish America are Clavijero's *Mexico* and Venega's *California*, which last was edited by Burriel, a celebrated Jesuit professor of Madrid.

THE JESUITS IN UPPER CALIFORNIA.

No Jesuit priest visited or was known in new or Alta California before 1849, if we except the exiled Fathers Bachelot and Short at San Pedro, from the Sandwich Islands in 1832, who shortly afterward left for Chile. In the northeastern portions of old Oregon, in the frontiers of the Alta California of 1800, among the Indian tribes of the Rocky Mountains of the present territories of Idaho and Montana, known as the Kootenais, Pen d'Oreilles, Cœur d'Alenes, Flatheads, Nez Perces, and Blackfeet, the Society, about the year 1839, commenced the conversion of those wild people, under the supervision of De Smedt, Nobili, Mergarine, Congiato, Accolti, Hoecken, Joset, and other members of the Order, some of whom serve at present in the two colleges at Santa Clara and San Francisco, and all of them well known among the old pioneers of Oregon *ante* 1848. These conversions were not well settled until

about 1846, and in 1861 they had established six reductions or villages, and gathered nearly four thousand of these tribes into the Catholic fold, besides obtaining a powerful influence, over the Blackfeet, who numbered fifteen thousand souls, by the estimates of their missionaries. The great college of the Order at Santa Clara was founded by Father John Nobili in 1851, at the invitation of Archbishop Alemany, and has become one of the first institutions of learning in California. Their students have not only come from all parts of our Pacific domain, but from Baja California, Western Mexico, Central America, Ecuador, Peru, and Chile.

PRESENT STATUS OF THE SOCIETY.

During the time of the first French Empire, the Society of Jesus was re-established again by the Papal See, and since the opening of China and Japan, and the consolidation of the British empire in India (1840–1863), they have again spread over those immense countries. In all the English domains and in the English tongued American countries, they are in the most flourishing state, but in only a few of the Catholic States of Europe are they allowed to hold property as a community, and only permitted to act as parish priests or under the complete jurisdiction of the Bishops. In several of the Protestant States of Europe, they are still under the ban of exile, as well as other Roman Catholics. In all the Spanish-American Republics within the last twenty years, they are now allowed to establish their schools and missions, but in none of these Roman Catholic countries do they exercise as much influence, nor are their numbers at all numerous, compared to other Catholic Orders or secular priests. In the United States and in the British empire they enjoy all the liberties and rights that are accorded to all opinions in religious matters, and they not only therein govern a large number of colleges and Catholic parishes, but may be said to be vastly more protected and respected than in any State or nation of the Latin race. In 1783 their convents, colleges, and other

effects were sequestered to the crown in the new Italian kingdom, and to the number of thousands they were remorselessly turned out into the world, great numbers of them gray-headed old men, who had lived since their youth in colleges and convents. The enemies of the Jesuits in Europe have one crying fault, that they make mountains of diatribes against them for defending their personal and community rights, and for acting precisely as all other men act when there are two fierce parties in the field. The great mistake of the Jesuits appears to have been allying themselves to the State as coadjutors of their political policy, and these, using them as tools, have ground them between the upper and the nether millstones. "The loss of every thing good is to be feared," wrote Loyola, sharply, to Ardos, at the Court of Spain, "when Jesuits mix much with the great ones of the world." The greatest good of the greatest number, says his biographer, was always on his tongue.

A curious fact occurs in their history, connected with American Revolutionary history. When Father Carrol, a member of the Society, and a cousin of Charles Carrol of Carrolton, who was a native of Maryland, and the first Archbishop of Baltimore, was sent by the old Congress with Dr. Franklin to Canada, to stir up the people of that country to aid the colonial revolt, some of the former French Jesuit priests who had remained in the country, by a compact with the British Government that they should reside in peace there, but without exercising their functions as allowed (*ante* 1762) by the French monarchy, sedulously opposed Carrol's projects, with the majority of the other Catholic priests, and these two envoys were obliged to leave. Both of them, however, were transferred as the agents of Congress to France, and every well-informed American knows with what fortunate results to the cause of independence and freedom. ALEX. S. TAYLOR, M. D.,

in *S. F. Bulletin*, January, 1868.

TO THE PLIOCENE SKULL.

A HUMAN skull has been found in California in the pliocene formation. The skull is the remnant not only of the earliest pioneer of the State, but the oldest known human being. * * * * * The skull was found in a shaft one hundred and fifty feet deep, two miles from Angel's, in Calaveras County, by a miner named James Matson, who gave it to Mr. Scribner, a merchant, and he gave it to Dr. Jones, who sent it to the State Geological Survey. * * * * * The published volume of the State Survey on the Geology of California states that man existed here contemporaneously with the mastodon, but this fossil proves that he was here before the mastodon was known to exist.—*Daily Paper.*

"Speak, O man, less recent! Fragmentary fossil!
Primal pioneer of pliocene formation,
Hid in the lowest drifts below the earliest stratum
Of volcanic tufa!

"Older than the beasts, the oldest Palæotherium;
Older than the trees, the oldest Cryptogamia;
Older than the hills, those infantile eruptions
Of earth's epidermis!

"Eo—Mio—Plio—whatsoe'r the "cene" was
That those vacant sockets filled with awe and wonder—
Whether shores Devonian or Silurian beaches—
Tell us thy strange story!

"Or has the Professor slighly antedated
By some thousand years thy advent on this planet,
Giving thee an air that's somewhat better fitted
For cold-blooded creatures?

"Wert thou true spectator of that mighty forest
When above thy head the beautiful Sigillaria
Reared its columned trunks in that remote and distant
Carboniferous epoch?

"Tell us of that scene—the dim and watery woodland
Songless, silent, hushed, with never bird or insect, [mosses,
Veiled with spreading fronds and screened with tall club-
Lycopodiacea—

"When beside thee walked the solemn Plesiosaurus,
And around thee crept the festive Icthyosaurus,
While from time to time above thee flew and circled
Cheerful Pterodactyls.

"Tell us of thy food—those half marine refections,
Crinoids on the shell and Brachipods *au naturel*—
Cuttle-fish to which the *pieuvre* of Victor Hugo
Seems a periwinkle.

"Speak, thou awful vestige of the Earth's creation—
Solitary fragment of remains organic
Tell the wondrous secrets of thy past existence—
Speak! thou oldest primate!"

Even as I gazed, a thrill of the maxilla
And a lateral movement of the condyloid process,
With post-pliocene sounds of healthy mastication,
Ground the teeth together.

And, from that imperfect dental exhibition,
Stained with expressed juices of the weed Nicotian,
Came these hollow accents, blent with softer murmurs
Of expectoration:

"Which my name is Bowers, and my crust was busted
Falling down a shaft, in Calaveras County;
But I'd take it kindly if you'd send the pieces
Home to old Missouri!"

FRANK BRET HARTE,
in *The Californian.*

THE GULF STREAM.

THE *Broadway Magazine* for October, 1867, propounds a theory of the gulf stream which will be amusing to navigators and others who have studied the subject of ocean currents theoretically or practically. The writer, after giving a readable account of the gulf stream, but not stating and refuting, as he should have attempted to do, existing explanatory theories before broaching his own, claims that the stream is a subterranean water, mainly fed by the Mediterranean Sea. In other words, he thinks that the waters of the Mediterranean descend into the bowels of the earth through the vortex of Scylla and Charybdis, and pass by an underground channel, beneath the Atlantic Ocean, to a point opposite the coast of Yucatan, where they issue with such force as to start a current at the rate of three miles an hour, which does not expend its momentum until it has moved for thousands of miles along the American coast, and swept past the British isles into the Arctic Sea. This gigantic theory stands, like a bird at roost, upon one spindling leg of fact.

This fact is, that an enormous amount of water is constantly pouring into the Mediterranean through the Straits of Gibraltar from the Atlantic Ocean, and also from a number of large rivers, including the Nile. Where, asks the theorizer, does this water go? and he heads off the only true answer to his question by saying "it is impossible that it should pass off in exhalation." Assuming this impossibility, he revives (for the idea is not original with him), and introduces to the world with sundry amendatory flourishes, the absurd notion of the subterranean, natural canal aforesaid. It is not often that a theory can be effectually exploded by a single charge of critical powder; but such is the case with this one.

Not only is the surplus water evaporated from the Mediterranean, but the volume of that sea would be still further reduced but for the supply (of which the writer takes no notice) from the Black Sea through the Sea of Marmora and the Straits of the Dardanelles. The Black Sea, though not quarter as large as the Mediterranean, receives an ample supply from rivers—about one-third of all the running waters of Europe emptying at last into its bosom. The determination of the current from the Black Sea, as well as from the Atlantic, into the Mediterranean is perfectly explained by the fact of evaporation, which the writer rashly pronounced "impossible." The inpouring of fresh water from the tributary rivers and the fall of rain being insufficient to make good the losses by evaporation, the Mediterranean levies upon her neighbors, and they promptly honor her calls, for more water. That is the whole mystery, which proves, upon examination, to be no mystery at all. The old bugaboo of Scylla and Charybdis is reinvested with its ancient terrors by this modern myth-maker; whereas, as a matter of fact, it is not much of a whirlpool after all, and by no means dangerous to skillful navigators. The phenomenon is readily explained by the extreme narrowness of the Straits of Messina at that point, and the conflict of currents which there takes place—currents probably caused by the influx of waters from the Atlantic Ocean and the Black Sea.

The cause of that mighty ocean river which we call the gulf stream is not a puzzle which requires an hypothesis so very far-fetched. It is much more easily accounted for by the theory of the great accumulation of water on the eastern coast of Africa, between the tropics, by the action of the trade winds, or by the rotation of the earth, or by the progress of the tidal wave, or by the constant interchange of cold and hot waters between the different parts of the globe necessary to maintain the equilibrium of temperature in the ocean by movements analogous to those perpetually going on in the atmosphere.

If we should admit the theory, which we may call "for short" the "Mediterranean," that would explain only the gulf stream. But there are numerous other ocean currents, almost equally marked in their differences from surrounding waters—such as the "equatorial," the "Japan," the "Bengal," the "Arctic," the "Antarctic," the "Cape Horn," the "Peruvian," and the "Mexican." Shall we suppose a subterranean stream in their cases also? Certainly not, unless we wish to start paradoxes or propound theories for the sake of seeming original and audacious. This may do very well in politics, but it will not answer in science. Currents of the ocean, like currents of the air, move in obedience to certain simple laws for the equilibrizing of temperature; and though we do not yet fully understand them, we know enough of them to save us from the necessity of concocting such ridiculous theories as the one upon which we have commented.—*N. Y. Journal of Commerce.*

THE "GULF STREAM" OF THE PACIFIC OCEAN.

IT was Lieutenant Bent, of the U. S. Navy, an officer of much scientific merit, and who was attached to the expedition to Japan under Commodore Matthew C. Perry, who discovered a river in the ocean—the Pacific—flowing northward and eastward along the coast of Asia, corresponding in every essen-

tial point with the gulf stream of the Atlantic, and impinging on the north coast of America—imparting its southern influence to the coast of Oregon and California, to that degree that the winters are so mild in latitude 48° north, that snow rarely falls there, and the inhabitants are never able to fill their ice-houses for summer; and, *per contra*, the vessels trading to Petropaulovski, on the coast of Kamschatka, when becoming unwieldly from the accumulation of ice on their hulls and rigging, run over to a higher latitude on the American coast, and thaw out, in the same manner that sailing vessls frozen on the Atlantic coast of America, retreat to the gulf stream, until favored by an easterly wind. The fountain of the great Pacific "river in the ocean," from which this stream springs, is the great equatorial current of the Pacific, which, in magnitude, is in proportion to the vast extent of that ocean, when compared with the Atlantic. It extends from the tropic of Cancer, on the north, to Capricorn, on the south, and has a width of near eight thousand miles; and, with a velocity of from twenty to sixty miles per day, it sweeps to the westward in uninterrupted grandeur, around three-eighths of the circumference of the globe, until diverted by the continent of Asia, and split into innumerable streams by the Polynesian Islands.

NUMBER OF USEFUL PLANTS.

GERMAN author states that the number of useful plants has risen to about 12,000, but that others will no doubt be discovered, as the researches yet made have been completed in only portions of the earth. Of these plants there are 1,350 varieties of edible fruits, berries, and seeds; 108 cereals; 37 onions; 460 vegetables and salads; 40 species of palms; 32 varieties of arrow-root, and 31 different kinds of sugars. Various drinks are obtained from 200 plants, and aromatics from 266. There are 20 substitutes for coffee, and 129 for tea. Tannin is present in 140 plants,

caoutchouc in 96, gutta percha in 7, rosin and balsamic gums in 387, wax in 10, and grease and essential oils in 330; 88 plants contain potash, soda, and iodine; 650 contain dyes, 47 soap, 266 weaving fibers; 44 fibers used in paper-making; 48 give roofing materials, and 100 are employed for hurdles and copses. In building, 740 plants are used, and there are 615 known poisonous plants. One of the most gratifying developments is, that of 278 known natural families of plants, there are but 18 species for which no use has yet been discovered.

THE FIRST GOLD MINE.

THE first piece of gold found in the United States is said to have been found in Cabarras County, North Carolina, in 1799. It seems, from the account furnished Mr. Wheeler by Col. Burnbandt, that a boy named Conrad Reed went with his sister and younger brother to a small stream called Meadow Creek, on Sunday, and while engaged along the bank shooting fish he saw a yellow substance shining in the water, which he picked up, and found to be metal. His father carried it to Concord, and showed it to William Atkinson, the silversmith of the town, who was unable to tell what it was. It was taken home by Mr. Reed, and, being about the size of a small smoothing-iron, it was used as a weight against the door to keep it from shutting. In 1802 he carried it to market at Fayetteville, where the jeweler pronounced it gold, and melted it, producing a bar six or eight inches long. It was sold to the jeweler for $350, a big price, Mr. Reed thought. Upon subsequent examination, gold was found along the surface on Meadow Creek, and in 1803 a piece of gold was found in the stream that weighed twenty-eight pounds. Several other pieces were found, varying from sixteen pounds to the smallest particles. The vein of this mine was discovered in 1831.

CALIFORNIA.

O FAIR young land, the youngest, fairest far
  Of which our world can boast—
Whose guardian planet, evening's silver star,
  Illumes thy golden coast,—

How art thou conquered, tamed in all the pride
  Of savage beauty still!
How brought, O panther of the splendid hide,
  To know thy master's will!

No more thou sittest on thy tawny hills
  In indolent repose;
Or pourest the crystal of a thousand rills
  Down from thy house of snows.

But where the wild oats wrapped thy knees in gold,
  The plowman drives his share,
And where, through cañons deep, thy streams are rolled,
  The miner's arm is bare.

Yet in thy lap, thus rudely rent and torn,
  A nobler seed shall be;
Mother of mighty men, thou shalt not mourn
  Thy lost virginity!

Thy human children shall restore the grace
  Gone with thy fallen pines;
The wild, barbaric beauty of thy face
  Shall round to classic lines.

And order, justice, social law shall curb
  Thy untamed energies;
And art and science, with their dreams superb,
  Replace thine ancient ease.

The marble, sleeping in thy mountains now,
  Shall live in sculptures rare;
Thy native oak shall crown the sage's brow—
  Thy bay, the poet's hair.

Thy tawny hills shall bleed their purple wine,
  Thy valleys yield their oil;
And music, with her eloquence divine,
  Persuade thy sons to toil.

Till Hesper, as he trims his silver beam,
  No happier land shall see,
And earth shall find her old Arcadian dream
  Restored again in thee! BAYARD TAYLOR.

THE MILKY WAY.

THE milky way forms the grandest feature of the firmament. It completely encircles the whole fabric of the skies, and sends its light down upon us, according to the best observations, from no less than 18,000,000 of suns. These are planted at various distances, too remote to be more than little understood; but their light, in the medium of measurement, requires for its transit to our earth, periods ranging from ten to a thousand years. Such is the sum of the great truths revealed to us by the two Herschels, who, with a zeal no obstacles could daunt, have explored every part of the prodigious circle.

Sir William Herschel, after accomplishing his famous section, believed that he had gauged the milky way to its lowest depth, affirming that he could follow a cluster of stars with his telescope, constructed expressly for the investigation, as far back as would require 303,000 years for the transit of its light. But, presumptuous as it may seem, we must be permitted to doubt this assertion, as the same telescope in the same master-hand was not sufficiently powerful to resolve even the nebulæ in Orion. Nor must we forget that light, our only clue to those unsearchable regions, expands and decomposes in its progress, and, coming from a point so remote, its radiant waves could be dispersed in space. Thus the reflection is forced upon us, that new clusters and systems, whose beaming light will

never reach our earth, still throng beyond, and that, though it is permitted to man to behold the immensity, he shall never see the bounds of creation.—*Marvels of Science.*

CONCLUSION OF JOHN R. FELTON'S ORATION AT THE DEDICATION OF THE NEW MERCANTILE LIBRARY BUILDING IN SAN FRANCISCO, JUNE 18, 1868.

ND now I dedicate this temple to the true mercantile spirit—to the spirit of true honesty, which, rejecting the letter of the written contract, looks to its spirit, which, disdaining all deceit, all mean and petty advantages, takes the just for its rule and guide; to the spirit of true equality, which, stripping off from man all accidental circumstances, respects and reverences him according to his merit; to the spirit of enterprise, whose field is the earth, the air, the sea, the sky, and all that in them is; to the spirit of munificence, that never tires in lavishing its treasures on all good objects, on the scientific expedition, on the library, the University, on the cause of religion, and on the soldier battling for the right; to the spirit of loyalty, that submits calmly and patiently to that great bond which holds society together—the law—which aims to reform, but never to resist or overthrow; to the spirit of patriotism, which follows with affection, pride, and devotion the daring mark of our country's flag; and to the spirit which worships God.

THRILLING ADVENTURE WITH A BURGLAR.

THIS extract, from a reminiscence concerning a series of murders committed some years since in France, develops a rare instance of presence of mind in women. We will premise that the murderer was known by the fact that in some previous brawl or scene of murder he had lost three fingers from one of his hands.

There lived on the outskirts of Dieppe a widow lady by the name of Beaumaurice. She had no family, but with one servant girl lived in a very retired manner. The cottage in which she resided was situated about half a mile from the city, a little off from the public road.

Madame Beaumaurice had been the wife of an officer of the Guards. She was an extraordinary woman in every particular; but especially so in respect to a certain coolness of character she possessed in the midst of danger, which, together with a large amount of moral courage, made her a very notable person. The recent murders made, perhaps, less impression on her mind than upon any one else in Dieppe, although it was naturally supposed the retired situation in which she lived would have caused her to be more fearful.

About ten o'clock on the night of the 30th of April, just ten days after the murders in the Rue Grenard, Madame Beaumaurice went up into her bedroom. She was suffering from a nervous headache. She felt very sleepy, and seated herself. The lamp was placed on a chest of drawers behind her. Opposite to her was a toilet table, with a cloth on it reaching to the floor. She had already commenced taking off her clothes, when, happening to look around her she saw some thing that for a moment chilled her blood. It was the shadow of a man's hand on the floor. The hand had lost *three* fingers.

She divined the truth in a moment—the assassin was there—in her house—under the table. She made not the

least motion or sign, but reflected two or three minutes as to the best course to be pursued.

She divined what to do, and advancing to the door, called the servant maid.

"Oh, Mary!" exclaimed she, when the girl entered the room, "do you know where Mons. Bernard lives?"

"Yes, Madame."

"I have to pay 5,000 francs away very early in the morning. You will have to run to his house and get money for me."

"Very well, Madame."

"I will write a note, which you will deliver to him, and he will give you bank bills to the amount."

She wrote as follows:—

My dear Monsieur Bernard—The assassin of the Rue des Armes and the Rue Grenard is in my house. Come immediately with some gens d'armes, and take him before he escapes. HELENNE BEAUMAURICE.

And, without entering into any explanation with her servant, she dispatched her on her errand. She then quietly reseated herself and waited.

Yes, she sat in the room, with that man under the table, for a whole hour. She sat, calm, cool, and collected. She saw the shadow of the hand shift several times, but the murderer did not make any attempt to escape from his place of concealment.

In due time the *gens d'armes* arrived, and Jacques Reynaulds was arrested—not, however, without a violent struggle.

I need scarcely add that the most convincing proof as to his guilt was found, and in due time he was guillotined.

CALIFORNIA SCENERY.

THE Grayson picture is in the collection of the Mercantile Library of San Francisco. Gazing upon it and following its suggestions rather than criticising its execution, one can imagine the feelings of that pioneer family, who, after weeks of weary travel across the wide and desolate plains of the middle continent, and days of weary climbing up rocky steeps, through many dangers real or imaginary, have reached the Pisgah of their hopes, and are looking down upon the promised land lying in its still beauty like the sleeping Princess of the story, waiting but the kiss of Enterprise to spring into energetic life. There below them is not only the field for industry and enterprise, but a panorama of natural charms destined to inspire poets, to glow on the canvas of painters, and to take on the magic of human associations and tradition. The piney slopes are musical with the gurgle of hidden waters tumbling from the rim of still lakes; the coniferous woods open like columned aisles; silver mists hide the wandering streams in abysmal cañons; purple ridges wall the bright sky in straight lines to left and right; below them imagination pictures the billowy foot-hills, tawny with dry stubble, and islanded with oaks of never-failing verdure; while still beneath and beyond, the broad valley of the Sacramento shimmers in its summer gold that spring will turn to a variegated parterre, and from its western verge rises the Coast Range, soft as cloud-land mountains, looking into the Pacific. Over this scene are spread those delicious tints of blue and purple and gold, those blending shades of violet, lilac and topaz, which give to the landscapes of California all the charm of fairy illusion. This is the Rasselas Valley of sober fact. Here beauty awaits the poet who shall praise and the limner who shall copy her manifold fascinations.—*Overland Monthly*, July, 1868.

MOUNT TAMALPAIS FROM THE EASTERN SLOPE OF ANGEL ISLAND.

LIFE.

LIFE! what a gift it is in contrast with non-existence. Life, even the lowliest, a flower's life, a bird's! How the lily and the lark praise God for their being, till the air seems odorous and musical with their thanksgiving. Yet the winged bird is a poor soulless wanderer, and the brightest flower dies with the summer. How, then, with *your life*—an *immortal life*, bearing God's image!—can you be thankless? A life so conditioned for development, cradled in a star-hung world, and watched and warded by angels, and preparing and advancing to a destiny for whose glory thought has no image and language no name! Men, immortal men, sons of God, princes of an endless empire, borne in this chariot of creation to the palace and the throne!—you who might have been a fading flower, a dead stone, a nothing—how can you be thankless? You, whose afflictions at their most, in contrast with your mercies, are no more than a single plume gone from the wing of a soaring eagle—a stain of dust on the iron wheel of the golden car of a triumphing conqueror! What mean you, thanklessly to count your losses, and trials, and sorrows? Awake to better thoughts and higher moods! Lift your eye from the low paths you are treading, to the divine love that watches you, the shining angels that wait on you, the eternal city that opens its glorious gates to welcome you!—*Rev. Dr. Wadsworth, in the Occident*, Jan. 4, 1867.

TAMALPAIS.

NORTHWARD he lies from our home in the town;
Over the ribbon of water that flings
A silver ruffle about his brown
Harsh hem in its tremulous eddyings.
Old Tamalpais! he looks so grave,
With his brow in the cloud and his chin in the wave.

Grand old monitor! proud in his might!
Silent and watchful, guarding us well,
Is it his eye that is piercing the night,
Or a giddy star that he caught as it fell?
Old fellow, 'tis fitting and meet that you are
In imperial majesty crowned with a star!

He is so old that his wrinkled hide
Is gray as a frown on the rough, mad sea;
But his might is alive, and the hurricanes glide
Not easily by him; he scatters the glee
Of the wild, roving winds; you may know when he wakes
In a laugh, for the echoing earth fairly quakes.

Broad banners of mist thread in through the Gate,
And gather about him as cold as a shroud;
But little he cares, for his bare, hoary pate
Is capped with the sunlight far over the cloud.
Brave Tamalpais! he looks so grand,
Bluffing the ocean off, guarding the land!

CHARLES WARREN STODDARD, in the *Californian.*

CHILD-LAND.

THERE is a vein of human feeling that will waken a responsive cord in every heart unseared by worldly pursuits, in this eloquent poem:—

Through silver portals arched with flowers,
And turning in with silver sound,
Attended by the laughing Hours,
And fairy music floating round
In crystal circles till it weaves
A magic spell that softly breaks
In trembling murmurs on the lakes,
Like melody of falling leaves—
With roses crowned, a frolic band
Go ever trooping in to Youth's enchanted land.

An Eden-realm of honeyed streams,
And shifting lights that touch and change,
With crimson flecks and golden gleams,
The landscape into something strange;

And gorgeous fabrics floating through
The liquid sky into the west,
And on the sunset's flaming breast,
Like dying dolphins, changing hue;
And purple mornings, lit with gems,
Capping the blooming hills with jeweled diadems.

And falling waters waving down
In snowy veils that break and spread
In diamond showers, and lift a crown
Of circling rainbows overhead;
And meadows golden-draperied,
With lights and shadows woven in;
And fountains musical with din
Of laughing Naiads, faintly heard;
And sunny meres and groves and vales
Where fauns and sylvans sport and breathe their evening tales.

And tricksy fairies in the realm
Weave mystic circles on the green,
And dance beneath the aged elm
In honor of their beauteous queen;
Or ring their tiny heather-bells,
And sound their bugle-horns until
Swift echoes fly from hill to hill,
And die along the winding dells;
Or flit athwart the moonlit skies
On winged thistle-downs and silver fire-flies.

And pleasures wed with rosy joys
Forever mingle with the band
Of winsome girls and gleesome boys
That dwell within the charmed land;
And warbling music lulls to rest,
While airy dreams and visions fine,
Touched with a beauty half divine,
Throng in upon the sinless breast;
And angels, hovering round the while,
Kiss oft the dreamers' lips and wreathe them with a smile.

O happy land! O happy days!
And happy dwellers, loved of God!
Along whose flowery paths and ways
Celestial feet have often trod.

Through misty years that gather fast,
With weary toil and patience fraught,
How oft I turn and feed my thought
On golden echoes from the Past,
And gaze until my eyes grow dim
Where at the portals stand the flaming cherubim.

LYMAN R. GOODMAN.

SELECTIONS FROM A LECTURE-SERMON AFTER VISITING YOSEMITE VALLEY.

Delivered in San Francisco, July 29, 1860, by Rev. T. STARR KING.

A FRESH impression of the marvels of nature always awakens a religious emotion. I thought of this more seriously than ever before, when, about two weeks ago, I first looked down from the Mariposa trail into the tremendous fissure of the Sierras. The place is fitly called "Inspiration Point." The shock to the senses there, as one rides out from the level and sheltered forest, up to which our horses had been climbing two days, is scarcely less than if he had been instantly borne to a region where the Creator reveals more of himself in his works than can be learned from the ordinary scenery of this world. We stood, almost without warning, on the summit of the southerly wall of the valley, and obtained our first impression of its depth and grandeur by looking *down*. A vast trench, cloven by Omnipotence amid a tumult of mountains, yawned beneath us. The length of it was seven or eight miles; the sides of it were bare rock, and they were perpendicular. They did not flow or subside to the valley in charming curve-lines, such as I have seen in the wildest passes of the New England mountains. The walls were firm and sheer. A man could have found places where he could have jumped three thousand feet in one descent to the valley. More than a thousand feet beneath us was the arching head of a waterfall, that leaped another thousand before its widening spray shat-

tered itself into finer mists in a rocky dell. The roar of it was a slight murmur at our elevation. On the wall opposite, about a mile across the gulf, a brook was pouring itself to the valley. Although it was slipping down more than half a mile of undisturbed depth, it appeared to be creeping at its own will and leisure. We could not believe that the awful force of gravitation was controlling it.

> "But like a downward smoke, the slender stream
> Along the cliff to fall and pause and fall did seem."

Noble trees of two hundred feet stature, by the river-side below, were tiny shrubs. The river itself lay like a bow of glass upon the curved green meadow which nestled so peacefully under the shadow of the Egyptian walls. And off from the northernmost cliff, retreating a mile or two from it, soared a bare, wedge-like summit of one of the Sierras—ashy in hue, springing above a vast field of snow which could not cling to its steep smoothness, but lay quietly melting to feed the foam and music of a cataract.

All this, no doubt, seems tame enough in the wording; and even if a vivid picture of the actual scene could be given here by an adequate description, some of you might say that it is only a pile of rock overhanging a river-course —not very remarkable, and certainly not religiously suggestive.

But I do not think that there was one in our party who had the feeling, when that surprising view first broke upon us, that he was looking merely upon a freak of natural forces, or a patch of chaos. I am sure we all felt that something more than matter was shown to us—a clearer gleam of the Infinite Majesty. I believe that the impression was, in some degree, like that which the Israelites felt amid the passes of Sinai, when the Divine glory was on the mount. If the emotion which that first view excited could remain with us, I am sure that all life would be more reverent and loyal.

And that is a large portion of the value of such impressive wonders in nature. They break in, for a moment, if no more, upon our materialistic and skeptical estimate of the

world, and show us that it is penetrated with Divine meaning—that it is an expression of Infinite power and thought. Unless we become atheists, we have no right to live unmoved and indifferent amid the processes of nature. Have you ever considered what the relation of the Divine mind is to a mighty cliff, to a sublime mountain, to a lovely landscape? *God creates it and renews it by the direct, immediate action of his conscious thought.* We looked suddenly upon the grandeur of the Yosemite Valley, and perhaps a year's residence at that "Inspiration Point," might so exhaust our interest in it, as to make it uninspiring. It is not more than ten years since the first white man gazed upon those cliffs and ramparts. Yet how many thousands of centuries have they been fashioned under the Almighty hand! Since the morning when Adam first looked upon the world, they have stood strong and venerable as now. And ages before the creation of the ancestral man, the processes were at work in that valley, hardening the rock, preparing the soil, varying the verdure, channeling the paths of the streams, that the picture which we looked upon might be finished. Think of the months of toil and the delicacies of technical skill in laying in the color, and adjusting the lights and perspective, which an artist sometimes expends upon one mimic landscape. And in comparison with that, remember that every great landscape, like the one I am speaking of, is a real picture which the *Infinite Mind* has been at work upon during immeasurable centuries. Every natural force is one of his pencils; every variety of substance is one of his colors; and every nice effect of grace or majesty has cost, perhaps, ten thousand years and all the resources of the natural world. Is it right, therefore, for us to take so little interest in the glories of nature?—ought we not to be far more frequently and deeply moved by them, when we reflect that God has cared for them during countless years? If he had not been interested in the cliffs and pillars of that valley among the Sierras ages before we were born, and continuously interested in them;—if for one moment in all the stretch of time which geology reports on its huge dial, his care and thought had wandered from them, they would

have dropped into nothingness. For of the Divine Wisdom it is written in the Proverbs: "When he prepared the heavens, I was there: when he set a compass upon the face of the depth: when he established the clouds above: when he gave to the sea his decree that the waters should not pass his commandment: when he appointed the foundations of the earth:—then I was by him, as one brought up with him: and I was daily his delight, rejoicing always before him." This means that all outward order and beauty are copies in matter from an ideal picture first formed in the Divine Reason. It means, also, that he who is insensible to the wonders of nature is indifferent to the patient and continuous art of God.

When we pass down by the steep trail from the top of the wall into the valley, to its floor, and begin to examine its features in detail, the religious impressions become more varied and distinct. If there are any especially religious impressions to be gained at all by seeing majestic rock scenery, the Yosemite is the place to receive them most powerfully. For, so far as we know, it offers the most stupendous specimens of natural masonry to be seen on our globe. Switzerland has no gorge that compares with it. The pass of the Tête Noir, the ruggedness of the Via Mala, the cliffs of the Splugen, the precipice over which the Staubbach shakes itself into water-dust, can not compete with the walls and pinnacles of the Yosemite. The desolate and splintered walls of Sinai and Horeb are not a quarter so high. No explored district of the highest Andes displays such masses of clean, abrupt rock. The Himalayas alone can furnish competitors for its walls and turrets, if any portion of the earth can—and I have no knowledge that they are able to. We often read, in accounts of mountain districts or mountain-climbing, about precipices that are thousands of feet in descent, or of cliffs that spring naked and sheer to an equal height. The statements, however, are almost always extravagant exaggerations. But in the Yosemite, a man may ride close to a crag, whose summit, as he holds his head back to discern it, is more than three thousand feet above him. He may stand in the spray of a

waterfall and see, forty-three hundred feet over his head, the edge of a mountain-wall that shields the water from the early afternoon sun. He may look up to a tower, which resembles an incomplete spire of a gothic minster, and see its broken edges softened by more than three-quarters of a mile of distance directly above his eyes. He may sit at evening, when the sun has retreated from every portion of the valley, and look at the "South Dome," a vast globe of bald rock almost a full mile in height, while the sunset is sheathing it with impalpable gold. Or he may lie, at noon, beneath a tree at the base of one wall of the valley, and allow his eye to wander up at leisure the magnificent battlement called "El Capitan." It is not so high as some of the others I have named, for it is a little less than four thousand feet. But there is not a crevice in it where any thing green can lodge and grow. There is no mark or line of stratification. There is no crack in its huge mass. It is one piece of solid, savage granite, which seems to have sprung up over the flowing river and the fertile meadow, to show, by contrast, what the *majesty* of the Infinite is as compared with his *beneficence*, and how tremendous are the forces of cohesion that have compacted the bones of the globe.

No one can look at such pinnacles and ramparts without a feeling of awe such as he has seldom experienced. And why is it? Not simply because the rocks are so high and so massive. Not merely because so powerful an impression has been made on our senses. Many a bear has wound his way down those walls without feeling any sense of sublimity. Many a deer, with eyesight keener than man's, has drunk from the calm pools of the river, and looked up to the crown of one of those proud crags without any emotion that interfered with the satisfaction of his thirst. It is only the senses of *man* that appreciate the majesty revealed in matter. And it is because they are connected with *spiritual* powers in us. Our senses are only tubes and lenses through which the mind and soul, through which an *immortal* faculty, looks out upon the world. And if they discern what the beasts can not detect, if their reach is so wide and high, if their objects are so grand and varied, what must the soul

be to which they are vassals? What is this inward emperor whose servants are kings? Shall we believe in the senses, and not believe more reverently in the soul they honor, and which ennobles them? Shall we use these marvelous ministers to which the grandeurs of space report, and not believe in the central and mysterious power that is educated by the material which these clerkly senses gather? Yea, shall we not care for the spirit which thrills the senses with their finest life, and overflows upon them its own divinity? Shall we not learn that our inward nature is heaven-born from the greatness of our senses, and as it is set in commerce with God's works through its physical attributes, strive to guard it against evil, which abases the frame that is made for its present home, and keeps it from communion with God himself, who has opened other channels, in its own essence, for direct intercourse with his love?

I believe that such questions ought to rise in every nature that receives a thrill of sublime and reverential emotion from such natural scenery as the Yosemite. God is patiently educating us here to a knowledge of what we are. And when any human being attains that knowledge, the soul must be religious, or must try to be. No person can learn why it is that he is capable of seeing something majestic, mysterious, sublime, in a wall of granite, without revering his nature after it, and feeling that he has a power within him which is a divine trust. It is because we are religious beings that we see in the mountains and the cliffs what the brutes that inhabit them can not see; and if we go to the grandest scenery unprepared to receive stimulant to our religious nature from it, and return from the sight of natural wonders uninspired in our devout sensibilities, we lose the richest result which the natural magnificence was intended to produce in us, whatever physical refreshment and delight we may have gained, and whatever secular knowledge we may have reaped from the excursion. Our true *sight-seeing* is accomplished, when "the invisible things of *him* are clearly seen, being understood by the things which are made, even his eternal power and Godhead."

This quotation just made from St. Paul leads me to speak of another point which the visit to the Yosemite has impressed anew upon my mind—the fertility and aptness of the illustrations which the Bible offers for the grandest natural scenery. The Bible displays some spiritual passage for every emergency of our religious discipline and need. This is one of the chief seals of its providential relations to the spiritual training of the world. But it is equally remarkable that the most stirring scenes in nature, and even the sublimest discoveries of science, seem to wait for their fitting dress of description, until some verse from the old Hebrew seers starts out to offer its epithets and rhythm. He who goes into the most inspiring scenes of nature without a familiar knowledge of the Bible, and readiness to quote it, loses one of the purest sources of pleasure at the moment, and one of the most valuable means of fixing in his memory and heart the character and influence of the scenes themselves.

No man could fail to be deeply and religiously impressed with the first view of the valley as I alluded to it, when one stands over it and looks down into its trench. There may be passages of secular poetry that can describe some effects of its perpendicular walls. But only a man familiar with the prophets could concentrate the whole grandeur and religious suggestiveness of the view by a quotation. And he would chant out at once the sublime verse from Zechariah: "And the feet of Jehovah shall stand in that day upon the Mount of Olives, which is before Jerusalem on the east, and the Mount of Olives shall cleave in the midst thereof, toward the east and toward the west, and there shall be a very great valley; and half of the mountain shall remove toward the north, and half of it toward the south. And ye shall flee to the valley of the mountains."

Or suppose that standing on that height, over the yawning rent, a man should strive to picture to himself the earthquake forces that tore those cliffs apart, and opened a channel for the river so peacefully gliding and shining far below. What words could science give him, what passages from Buckland or Lyell, from Hugh Miller or Agassiz or Humboldt, that

would compare for a moment with the burden and fervor of these mighty verses from Habakkuk? "Jehovah stood and measured the earth; and the everlasting mountains were scattered, the perpetual hills did bow: his ways are everlasting. I saw the tents of Cushan in affliction: and the curtains of the land of Midian did tremble. * * *Thou didst cleave the earth with rivers.* The mountains saw thee and they trembled: the overflowing of the water passed by." Even the whiteness around the cones of the distant Sierras suggested the passage from Jeremiah—"Will a man leave the snow of Lebanon which cometh from the rock of the field? or shall the cold flowing waters that come from another place be forsaken?"

Sitting in the valley to enjoy from a distance the beauty of the waterfalls, or exploring their basins and their paths, a great number of exquisite poetic verses from the Prophets and Psalms sing themselves through the memory to the music of the cataracts. "He watereth the hills from his chambers: the earth is satisfied with the fruit of his works." "The floods, O Lord, have lifted up their voice. The Lord on high is mightier than the voice of many waters." "And there shall be upon every high mountain and upon every high hill, rivers and streams of water."

But what words shall describe the beauty of one of the waterfalls as we see it plunging from the brow of a cliff nearly three thousand feet high, and clearing fifteen hundred feet in one leap? It is comparatively narrow at the top of the precipice; but it widens as it descends, and curves a little as it widens, so that it shapes itself before it reaches its first bowl of granite into the charming figure of the comet that glowed on our sky two years ago. But, more beautiful than the comet, you can see the substance of this watery loveliness ever renew itself, and ever pour itself away. And all over its white and swaying mistiness, which now and then swings along the mountain side, at the persuasion of the wind, like a pendulum of lace, and now and then is whirled round and round by some eddying breeze, as though the gust meant to see if it could wring it dry;—all over its surface, as it falls, are shooting rockets

of water, which spend themselves by the time they half reach the bottom, and then re-form for the remaining descent —thus fascinating the gazer so that he could lie for hours never tired, but ever hungry for more of the exquisite witchery of liquid motion and grace. It is as the Prophet said: "The mountains and the hills shall break forth before you into singing, and all the trees of the field shall clap their hands."

And when, in the afternoon, we follow to the very base of one of these cataracts, and stand amid the spray that is smitten into rainbows, which dazzle the senses as if the most startling wonders of fairy landscape had been realized around us, it is no secular language or verse that will utter the strange joy—the rapture of sight, of which the soul is conscious. As we think of the service which the snow-fed streams discharge to the thirsty lowlands, toward which, from their lofty home, they leap in music, and as we remember that they never fail, though men are ungrateful and callous in heart to the Infinite beneficence, it is the prophet's words which the flaming spray seems to chant through its splendor—"How great is his goodness, and how great is his beauty!" And the verse of the Psalm rises also to complete the lesson of the glorious hour: "Out of Zion, the perfection of beauty, God hath shined."

These visible wonders in the material world which we catch through the senses, are intended, I believe, to arouse our attention so that we shall think more of the wonders that encircle or curtain us which the senses can not grasp.

One of the sublimest passages in the book of Exodus—marred in our Bible by inaccurate rendering—is that in which Moses begs for a clearer vision of the Divine glory than his eyes had yet beheld. "But God said, thou canst not see my face; for there shall no man see me and live. And the Lord said, Behold there is a place by me, and thou shalt stand upon a rock. And it shall come to pass, while my glory passeth by, that I will put thee in a cleft of the rock, and will cover thee with my hand while I pass by. And I will take away my hand, and thou shalt see what passes after me—the train

of my effects; but my face shall not be seen." Now God offers to lift every one of you, by a little study and thought on your part, to a point of observation, from which you can discern the vast train of his effects in the physical universe.

How little we *see* of nature! How utterly powerless are our senses to take any measure or impression of the actual grandeur of what we do see! Think of being moved religiously by looking at a pinnacle or bluff four thousand feet high, and then think what the earth contains which *might* move us! What if one of the Himalayas could be cloven from its topmost tile of ice to its torrid base, so that we could look up a sheer wall of twenty-eight thousand feet, the equator at the bottom, and at the apex perpetual polar frost! And then think that the loftiest Himalaya is only a slight excrescence on the planet! What if we could have a vision, for a moment, of the earth's diameter, from a point where we could look each way along all its strata and its core of fire, in lines each four thousand miles in their stretch? And then, remember, that this is nothing—this is not a unit-inch toward measuring the diameter of the earth's orbit, and that earth and orbit both are invisible and undreamed of from the Pole Star or Sirius, which is the apex of a reach of space that we can write in figures, but which we could not have counted off yet, if we had begun six thousand years ago, and given each second to a mile! Or what if we could turn from delight at seeing a waterfall of fifteen hundred feet, which looks like the tail of a comet, and could get a sensuous impression of the actual trail of that light upon the sky, a cataract of luminous spray, steady and true, a hundred and twenty millions of miles in extent,—more than the distance between us and the sun? And yet this is but one spot upon the dark immensity!

God is creating and sustaining these splendors every instant. They are all present to his vision incessantly, and are embraced in his perpetual providence. "He telleth the number of the stars: He calleth them all by their names."

"Oh, what magnificence must glow
Great God, about thy throne!
So brilliant here these drops of light—
There the full ocean rolls—how bright!"

Perhaps the spirits of higher worlds are endowed to see and appreciate these larger proportioned marvels. Perhaps our senses here are prepared to fit our souls to take a wider out-look over the Creator's glories when we drop the robe of flesh. That is, if we do not abuse our privilege here, and come under the dominion of evil. And that may be one of the heaviest penalties of evil when you drop the flesh, and of unfaithfulness to high thoughts and studies here—incapacity to appreciate and adore the revelations of the Infinite Mind in the scale and splendors of the universe. Ought you not, I ask you, in a world which the Creator so adorns, and so surrounds with wonder, to try to ennoble your life, and prepare for the mysterious future of your being, by thinking more of the scene that embosoms you, and the mysteries so solemn and so glorious, amid which you dwell? Do you live in such a world as you *know* this is, without reverence, without awe, without pulsations of worship, without prayer, without devout gladness, without God?

The great Hebrew poet said: "From the end of the earth will I cry unto thee, when my heart is overwhelmed: lead me to the rock that is higher than I." Here is the point where our too rambling meditation must rest, and find its practical impressiveness and force. To an Eastern soul, full of piety and aspiration, a great rock suggested God and the soul's rest in God. In the hot East, during the parching summer, when vegetation shriveled, a rock on the plains, especially on the desert, gave shadow and coolness. It was the traveler's only shelter from the fierce, unclouded sun. We found in the Yosemite valley that it was delightful in the hot July afternoon, when the mighty ramparts of the meadows barred the sun's rays, and enabled us to ride or walk in the shade. Then I thought of the verse I have taken for the text, and of those words of Isaiah, "The shadow of a great rock in a weary land."

And then I thought of how desolate human life is—your life, my friend, whatever earthly good you may possess—if you have no grand religious scenery in the soul—if God is not a rock of defense and shadow to you amid the perils and trials of this world. So many of us there are who have no majestic landscapes for the *heart*—no grandeurs in the inner life! We live on the flats. We live in a moral country, which is dry, droughty, barren. We look up to no heights whence shadow falls and streams flow singing. We have no great hopes. We have no sense of Infinite guard and care. We have no sacred and cleansing fears. We have no consciousness of Divine, All-enfolding Love. We may make an outward visit to the Sierras, but there are *no Yosemites in the soul.*

Is your life described thus? If you have no religious joys or aspirations—no confidence in times when truth is in peril, that God lives to watch and protect it; no sweet hopes in your adversity born of the feeling that God is still near you; no disposition to trust one infinitely great and good, whose love is reflected in the heart of Christ, when your sweetest blessings are snatched away by death; no Sacred Presence over-shadowing you, to whom it is a relief to pray; your life *is* described thus, and it is a poor, pinched, meager, unfurnished, joyless existence you are leading. You are away from truth, from Christ, from your Father. I beseech you—not I, but the subject, the Bible, the Holy Spirit, your own soul—beseeches you to seek a nobler life, to find God as a Rock in your landscape by his power, a stream in your soul by his grace. You can find him thus. More easily than you can go to Yosemite, you can go to God. You can live nobly without seeing the crowning wonder of this State; but you can not live without God as your fortress and defense and strong tower. And if you fail to seek him in your days of strength and opportunity, the season will surely come, when, from the end of the earth, while your heart is overwhelmed, you will cry, "Lead me to the rock that is higher than I."

IRRIGATING CANALS AT THE OLD MISSIONS.

URING the Mission epoch, from 1770 to 1833, a vast amount of valuable labor was expended by the Padres in the formation of irrigating canals, or *zanjas*, and the constructing of expensive reservoirs and aqueducts, which last were built of stone and cement, as well as of brick. These extensive operations were carried on by the aid of Indians near by, and they abound in every Mission district in South Coast California. With the outlay of a few thousand dollars in the vicinity of each Mission, they could be made available for agricultural purposes next year. The following account of their status in Santa Barbara, from A. Jansen, the County Assessor, an old resident since 1833, and well acquainted with these matters, will show how the four Mission districts of that county stand in 1866: Zanja of Kamules and Pirru, five miles long; Zanja of San Cajetane, six miles long; Zanja of Santa Paulo, five miles long. These are in the extensive valley of Saticoy or Santa Clara River, which is some eight miles below Buenaventura Mission, and formerly pertained to that establishment. In the valley or Great Cañada which opens to the sea at Buenaventura Mission, there was the Zanja Santa Gertrude, of six miles; the Zanja San Martin, of four miles; the Zanja of San Miguel, of eight miles; another opposite the last, of five miles; and in another part of the Cañada, one of 2,000 yards. To these were attached aqueducts and reservoirs built of lime and stone, which would now cost not less than $40,000; and it is asserted by mechanics that they could be again set in operation for the sum of $2,000.

The works to supply the Mission and the lands near the town formerly cultivated by the Indians, were of greater extent than any other establishment in the south, except San Gabriel and San Luis Rey. There are three immense reservoirs two or three miles above the Mission, which are capable of holding millions of gallons of water, besides

several smaller ones, all of which are connected with the gardens of the Mission by zanjas of stone. All these works are substantially built of cement, brick, and rock, and at present would probably cost $100,000 to construct. They could all be made efficient at an expense of some $4,000, and would then be sufficient to supply the whole population of San Barbara town, in house and field. During the rebuilding of the church of the parish in the summer of 1866, the zanjas of the Mission were slightly repaired, and the water brought down for half a mile to near the court-house, for the making of adobes, which shows they are easily repaired for more important labors. These improvements could be easily leased from the Mission for a term of years at an annual rental of a few hundred dollars. The Mission Indians also dug some 12 or 15 miles of irrigating ditches on and near the Goleta Ranch, before 1830, which is nine miles off The aqueducts of the Mission also irrigated several hundred acres of land in its immediate vicinity.

The works at the Mission of Santa Inez are quite extensive, and consist of aqueducts, reservoirs, and cisterns, well built of brick, &c., standing—the present cost of which would exceed $50,000. They supplied from mountain streams about thirty miles of zanjas, which enabled the old priests to fully supply all the wheat, corn, barley, beans, fruits, and other crops necessary for the consumption of the Mission population. An American rancher in the vicinity assures us that $1,000 would put these works in good repair, as there is an abundance of water near by. This Mission had several fine pieces of valley land near by, which, though now only used for pasture, could be made with the old canals to raise large crops. The padres even established a flour-mill near the Mission, with a canal from the waters of the Arroyo Sankacotta, about 1825, and supplied themselves for several years independent of the Mission.

The neighboring Mission of La Purisima, some twenty miles off, had three large reservoirs and cisterns of mason work, besides other improvements of like character, which enabled the Padres to cultivate large portions of land of no use without such appliances, except for pasture. These

works are still in tolerable condition, and a few hundred dollars spent in repairs would utilize them all. All these irrigating canals of the Missions were trenches dug in the soil, something after the manner of our present mining ditches; and from the account of the Assessor, they amounted to about 100 miles in linear length in the county, which includes about thirty miles made on the ranches since 1830. Want of space prevents a further detail of the valuable statistics on this important matter in the office of the Assessor.

Taking the above four Mission districts at 100 miles of the ante 1833 irrigating ditches, we should have, allowing for all errors, about 700 lineal miles of similar improvements in the remaining nine Missions between San Juan North and San Diego. If these works were again put in repair, with American improvements, they could again be made to defy the seasons and benefit three or four millions of acres of land, and make the southern counties the garden of North America. The fourteen miles zanja made by Banning from Los Angeles to San Pedro in 1864, has had a most beneficial influence on the prospects of that county. —*Cor. S. F. Bulletin*, Oct. 17, 1866.

AN OLD EXPLORER.

HENRY R. SCHOOLCRAFT, the discoverer of the source of the Mississippi, and the author of a number of standard works on the Indianology of America, died in Washington, at the advanced age of 71 years. Mingling with the Western tribes to some extent during a period of thirty years, his life was a romance which, could it but be written, would be scarcely less interesting than the numerous works he has left behind him as lasting monuments of his industry and love of adventure. He was born in Albany, N. Y., in 1793, and was educated at Middlebury College. His father was the superintendent of a glass factory at Cheshire, Mass.,

and he applied himself to the art of glass-making, and in 1816 commenced the publication of a work on "Vitreology," which was never completed. The following year he paid a visit to the West, and published "A View of the Lead Mines of Missouri," and a record of his travels, under the title of "Scenes and Adventures in the semi-Alpine Regions of the Ozark Mountains of Missouri and Arkansas." In 1820 he was appointed geologist to an expedition under General Cass to the copper region of Lake Superior and the upper Mississippi, of which he published an account in 1821. In the course of the same year he was appointed Secretary of the Indian Commission at Chicago, and having traveled through Illinois and along the Wabash and Miami rivers, published a book of "Travels in the Central Portions of the Mississippi Valley" In 1822, having received the appointment of Indian Agent on the Northwestern frontier, he took up his residence at Sault St. Marie, near Lake Superior, and afterward at Macherian, on Lake Huron, and married the grand-daughter of a celebrated Indian chief, Miss Johnston, a lady of remarkable beauty and worth, who had been educated in Europe, and no less distinguished for her intelligence and culture than her personal attractions. From that time Mr. Schoolcraft became a diligent and successful student of Indian ethnology, poetry, and history. From 1828 to 1832 he was a member of the Legislature of Michigan, then a territory; in the former year he founded the Michigan Historical Society, and in 1831 the Algic Society at Detroit; two of his lectures before which, on the grammatic construction of the Indian languages, were translated by Mr. Duponcian into French, and received a gold medal from the Institute. At this period of his life he published several poems, lectures, and reports on Indian subjects, and a grammar of the Algonquin language. In 1832, he was appointed to conduct a second Government expedition, and was the first to discover the source of the Mississippi, of which he published an account in 1834. Two years after, having been commissioned to treat with tribes on the Upper Lakes, he procured from them the cession of 16,000,000 acres of land to the United States.

After acting for several years as Superintendent of Indian Affairs, and Chief Disbursing Agent for the Northern Department, he removed to New York in 1841, visited Europe in 1842, and in 1845 was appointed by the State Legislature to make a census of the Six Nations, which was published in 1848, under the title of "Notes on the Iroquois." In 1847, under an appointment by the United States Secretary of War, he engaged in the preparation of a work on the Indians, of which six quarto volumes have appeared, entitled "Historical and Statistical Information respecting the History, Condition, and Prospects of the Indian Tribes of the United States." In addition to the publication already named, Mr. Schoolcraft was the author of a great variety of works on the Indians, the most important of which was his "Algic Researches." In 1847 he was married again to a lady of South Carolina, since which time he resided in the city of Washington. Mr. Schoolcraft was an indefatigable explorer of American antiquities, in which branch of investigation he was an original pioneer, and his voluminous writings will long be consulted as leading authorities on whatever pertains to Indian character and manners.—*Virginia (Nevada) Territorial Enterprise.*

THE GREAT CANAL OF THE GANGES.

COMMENCING near Harswar, where the River Ganges debouches from the Himalayan Mountains, an arm of that stream is occupied as a feeder, and is crossed by a masonry dam, having 380 feet of sluice openings, and flank overfalls of such length as to give 517 feet of clear passage for floods in the river. The head works of the canal consist of a regulation bridge, of 200 feet water way, in ten openings of 20 feet each, and connected with the dam by a long line of masonry revetment. In the first 25 miles the canal meets with numerous difficulties, in crossing streams which drain the sub-Himalayas. Among

these are three rivers of considerable size—two of which, with subordinate streams, are admitted in the canal (a proceeding which seems to me to be of questionable propriety in a work of such magnitude, extent, and cost). The canal, however, is provided with dams, sluices, and overfalls for the escape of surplus waters, and regulating bridges to prevent damage to the canal by the floods of these rivers. Passing through a high ridge of land for two miles, with a maximum cut of 37 feet, overcoming the fall in the country and canal by a costly dam of masonry, and providing for navigation by an independent canal one mile in length, and its necessary locks, it crosses the valley of a river nearly two and a quarter miles in width, upon an embankment averaging 16½ feet in height at the bottom of the canal, with base of 350 feet, and top (which is "bottom of the canal") 272 feet wide. Upon this platform is built a canal to carry a depth of ten feet of water, and to pass 6,750 cubic feet of water per second. The canal has a uniform width on bottom of 140 feet, and water surface 170 feet wide, for the first 50 miles, with banks 12 feet high, 30 feet wide on top, and slopes generally one and one-half base to one foot rise. Over the great valley and embankment just described, the interior slopes are protected by retaining walls of masonry. This embankment is connected at one end with an aqueduct of masonry which is, in itself, one of the greatest works of our day. It is 920 feet long, 192 feet wide, has 15 arches of 50 feet span, five feet depth, and eight feet rise. The piers, which are ten feet thick at springing line, and twelve and a half feet high above the river, rest upon masonry foundations 20 feet thick, sunk 20 feet into the bed of the river, and completely secured. The side walls are each eight feet thick and twelve feet high. The water-way is divided into two channels, each 85 feet wide, and separated by a masonry wall six feet thick. The whole rises to the height of 37½ feet above the river. A continuation of earth embankment connects the whole with high grounds. This aqueduct and high embanked canal, lined throughout with masonry, together are nearly three miles in length, and the cost of their construction was very great. After passing this valley

the canal is upon ground favorable to economical construction. At 50 miles from the head it throws out the first great branch, which is 150 miles long, and discharges 1,240 cubic feet of water per second. The main stem is now reduced to 130 feet width on bottom and depth of nine feet water, which it carries to its second branch, which has a length of 70 miles and a discharge of 520 cubic feet per second. Here the main stem is again reduced to a width on bottom of 108 feet, but retains its depth of nine feet of water. The third branch is 172 miles long, and has a discharge of 1,336 cubic feet of water per second. At the point where this branch leaves the main stem the latter is reduced to 90 feet on bottom, with seven and a half feet depth of water. At the 250th mile it is again reduced in width, being 80 feet wide on bottom, and having seven feet depth of water. The fourth great branch is intended for a connecting line, and for navigation between the canal and the River Ganges. Its length is 43½ miles, and its capacity of discharge is 635 cubic feet of water per second. At its intersection with the main trunk the latter is reduced to 75 feet of bottom width, with six feet depth of water. At the terminus of the canal, 453 miles from the head, the width of bottom is 25 feet, and depth of water four feet.

The total length of the canal and its four main branches is 898½ miles. Each of the branches which I have named, as well as the main trunk, is a canal of navigation as well as irrigation; and each throws out great numbers of subordinate branches, which, in their turn, send off countless streams to distribute the waters. Every few miles bridges are provided for crossing; and at all suitable points the necessary appliances for using the water for power are provided. Plantations and orchards of timber and fruit trees were planted along the works. Every care has been taken to provide for the most economical and effective use of the water, and for the comfort, health, and prosperity of the native population who are to use it.

The area of cultivable land which is within the reach of these routes exceeds 11,102,000 acres, and contains a population of six and a half millions of souls. The capacity of

the canal is estimated to be equal to the irrigation of nearly 1,500,000 acres yearly, as they irrigate in India. And as the practice there is generally to irrigate one year and rest in fallow two years, the large quantity of four and a half millions of acres may be prepared for and be watered from the canals of the Ganges every three years. And as the practice of irrigating from wells still continues, and amounts to about one-fourth or one-fifth of the whole, the quantity so irrigated will amount to about 1,000,000 acres, and the total watered area, within the reach of the Ganges canal, about 5,500,000 acres, or nearly one-half of the whole irrigable district. The value of the increased productions from the lands irrigated by the Ganges canal is estimated already at six millions of dollars annually—a sum nearly equal to the total capital invested in the canal.

The direct returns in the way of water-rents, tolls, &c., on their extensive canals, pay the Government very well for the investment. The indirect benefits, in the way of public lands reclaimed, and revenues increased upon an average of from £30 to £40 ($150 to $200) per square mile per annum, swell the returns to the Government, in some cases, as high as 36 per cent. per annum, with prospects of increase. The essential benefits, however, accrue to the natives who employ the waters, by which they have been already saved from famine. To them they are of inestimable value.

By means of these beneficent works of the British Government, about twelve millions of inhabitants, dependent upon agriculture in India, receive constant employment, and are relieved from the danger of famine, which formerly visited them; produce, which can not be valued at less than fifty millions of dollars per annum, is placed beyond the contingencies of season; and public revenue, amounting to about fifteen millions of dollars yearly, is permanently protected from fluctuation in orninary times, and from annihilation during extraordinary ones.

The great value of these canals to India may be illustrated by the known effects of one of them within the last half century. The great canals of the Jumna, in the revolution

which disorganized the Mogul Empire, were almost destroyed—nearly obliterated. Irrigation from them had been extinct for upward of seventy years upon some, and upward of a century upon others, when the English undertook their restoration. Those who had used them had disappeared, and three or four generations of their descendants had resorted to the use of water from wells. When the canals were reopened in 1820, their use was a novelty, and the semi-barbarous people were so slow to avail themselves of the benefits of the water, that thirteen years passed off without any very great use being made of it. The season of 1833-34, one of partial famine, taught them its value; and that of 1837-38, the great famine year, extended its use so far that upon the western Jumna canal produce to the value of more than $7,000,000 was saved from utter loss, the inhabitants of five hundred villages were saved from devastating famine, and the returns to the Government for that one year, about three-quarters of a million dollars, exceeded by more than $130,000 the cost of rebuilding the canal. Upon the eastern Jumna canal results were similar, though the returns were not in the same proportion to the outlay. The fostering care of the Government, which extended itself even to the Eastern appreciation of the luxury of shade and fruit, has not been without its reward upon these canals. An expenditure for plantations, of about $25,000, has already returned to it more than double that sum, in the sale of timber, and the value of the trees remaining is estimated at fifteen times the outlay.

Although some of the amounts aboved stated are very large, the values may seem very small when measured by California prices. The Californian should bear in mind that the price of a day's labor in India is about five cents. The great bulk of its agricultural products—the food of its poor and crowded population—must have a price, at home, corresponding with that of its labor.

India is subject to great droughts, and its dense population have frequently been afflicted by famine. It may be said to be dependent upon irrigation, for which it has two seasons and two classes of crops. The season of rains is the sum-

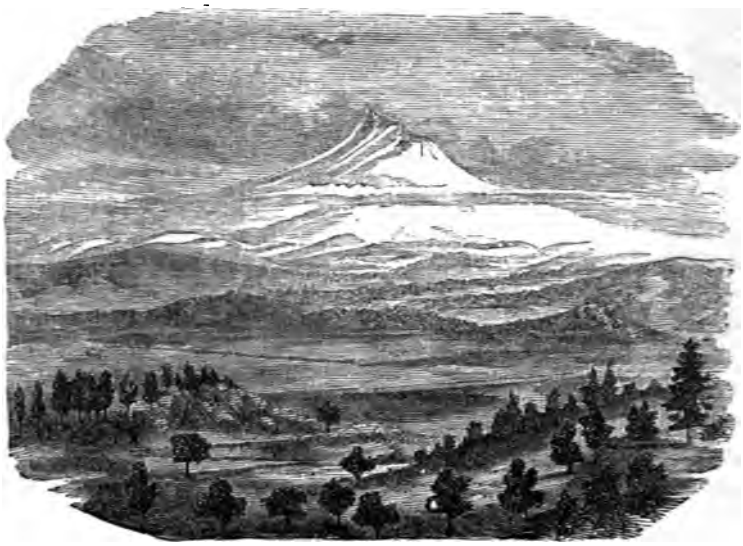
mer—of dry and cold, the winter. In the first, the chief crops are sugar, cotton, indigo, &c.; in the second, wheat, barley, &c.—all of which are not only largely increased, both in quantity and quality, by the free use of water, but are placed beyond the danger of utter loss by excessive drought.

WILLIAM H. BRYAN,
in *Sacramento Union*, April, 1866.

A NIGHT SCENE NEAR MOUNT SHASTA.

THOSE who have never visited Shasta Valley, can have but little idea of the sublimity of mountain scenery in California. There it lies, remote and isolated, a little world of solitary wonders. This lovely valley, in which is situated the comely little city of Yreka, is about eighty miles in extent, and varies from five to thirty miles in width. There is probably no spot upon the round earth which contains so many natural attractions for the man of science, the artist, the husbandman, the poet, and speculator, as this wonderful valley. The valley itself is a vast fertile prairie, dotted at picturesque intervals with groves of sturdy pines and "broad brown oaks." Here and there the level plain is relieved by pretty natural mounds, which vary in altitude from twenty to two hundred feet. On the east, the valley is bounded by a lofty spur of the Sierra Nevada, while high, high above all, the cloud-piercing Shasta Butte rears his snow-crowned summit to the skies. One cold, frosty night, in the winter of 1854, we witnessed a phenomenon in Shasta Valley, the like of which may never be seen again. Our attention was first attracted to the summit of the Butte, above which a cone of isolated clouds had gathered, as if for the purpose of piling the dizzy peak still higher up in the heavens. Everywhere else the sky was perfectly cloudless, and the moon was shining in all her mountain effulgence. Suddenly a

broad, black zone shot athwart the heavens from south to north, and remained fixed and motionless for the space of full two hours. This singular belt was apparently as black as jet, and yet the stars shone more brightly in its center than anywhere else.



VIEW OF MOUNT SHASTA, THIRTY MILES DISTANT.

Presently the moon entered this ebon zone, and the transcendent miracle of beauty which it presented surpassed, probably, any celestial glory which mortal ever beheld. When the planet reached the center of the dark belt, it became completely surrounded by a halo of brilliant rings, each varying in vividness, but all containing the prismatic hues of the rainbow.—*Placerville Index*, December, 1862.

KOTZEBUE'S VISIT TO CALIFORNIA.

OTZEBUE arrived from Sitka, in the San Francisco Bay, on the 25th of September, 1824. Being then anchored with his vessel opposite the Presidio, he remarks: "The California winter having now (last week in September) fairly set in, we had much rain and frequent storms. On the 9th of October the southwest wind blew with the violence of the West India tornado, rooted up the strongest trees, tore off the roofs of the houses and occasioned great devastation in the cultivated land. One of our thickest cables broke, and if the second had given way we should have been driven on the rocky shore of the channel (the Golden Gate) which unites the bay with the sea, where a powerful current, struggling with the tempest, produced a frightful surf. Fortunately, the extreme violence of the storm lasted only a few hours, but in that short time it caused a destructive inundation. The water spread so rapidly over the lowlands where we were bivouacked, that we had scarcely time to leave our tents and astronomical instruments. On comparing afterward the time of day at St. Petersburg and San Francisco, by means of difference of longitude, it appears from recorded observations that the tremendous inundation which occurred at St. Petersburg took place not only on the same day, October 9, but even began in the same hour as that we witnessed in California. In the Sandwich Islands the storm raged with similar fury at the same time as it did also farther west, at the Philippine Islands, where it was accompanied by an earthquake. In the Bay of Manila the storm was so violent that a French corvette, under Captain Bougainville, son of the celebrated navigator, was entirely dismasted—a fact related to us at the Islands, and afterward verified by us at Manila. The hurricane, therefore, raged at the same time over the greatest part of the northern hemisphere. The causes which produced it may have possibly originated beyond our atmos-

phere." Fearing a return of similar storms, Kotzebue observes: "We took advantage of fine weather on the following day to sail farther eastward into a little bay, and which is a perfectly safe anchorage at all seasons, surrounded by a romantic landscape, where Vancouver formerly lay (1792), called by the Spaniards Yerba Buena, after a sweet smelling herb common there."

Kotzebue was anchored in the Bay of San Francisco from the 25th of September to the 25th of November, at which date he took his departure for the Sandwich Islands. During his stay he made a journey in the first week of October to the Russian settlement of Ross, overland, by the way of San Rafael, and represents the intervening country as presenting a highly verdant appearance, and everywhere covered with a luxuriant growth of green grass. He returned by the 9th of October, and remarks that he experienced the finest weather after the great storm until the 18th of November. At this last date he started on an expedition up the bay, and appears to have reached, by the twenty-first, a point near or in the Sacramento River, which he locates in latitude 38 deg. 27 min., longitude 122 deg. 10 min., of Greenwich. From the latest American authorities used in "Bancroft's Hand-Book for 1864," Sacramento city is placed in latitude 38 deg., 34 min., 1 sec., longitude 121 deg., 27 min., 44 sec. This is only a difference, on the parallel, of say seven miles (7 min., 12 sec.), from Sutter's old embarcadero, and probably present improved instruments would have made his exact position near the levee of the 1866 City of the Plains. So that the Russian navigator, in 1824, was the first person who scientifically located any point of the Great Valley of California, between Shasta and the Tejon. In his trip he mentions the abundance of all kinds of four footed and feathered game, of which, from their tameness, his party slaughtered a large number, and returned in their boats to the ship on the twenty-third, after a five days trip, loaded with deer, elk, ducks, geese, &c.

Near the place where he locates the Pescadores (salmon fisheries?) he says the immense plains were carpeted with the finest verdure as far as the eye could see, and the great

range "of the Sierra Nevada, forty miles off," is covered from north to south "with ice and snow half-way down" to the lower hills. The verdancy and luxuriance of the pastures is also noticed in a previous trip he made to Santa Clara Mission as early as the 28th of September, a few days after his arrival from Sitka, so that this season is proved to have been one of the most forward on record, Kotzebue's accounts being the most valuable, as those of the country are handed down by tradition or now obtainable from memory of the ancient natives and the few first foreign settlers *ante* 1826.

On the 25th of November, he remarks, we towed out of the bay with a northwest wind, which here "regularly brings fine weather." This last, however, is not the case since 1849. The sea was still so much agitated by the recent southwest storms that it rolled such immense billows into the channel, which unites with the bay (the Golden Gate), as to threaten his ship, the *Enterprise*, with destruction by being dashed against those walls of sea-water by the force of the current from the channel—the vessel refusing to obey her helm. It is advisable, he thoughtfully notes, not to attempt sailing out in these seasons until the channel is tranquil, after blowing several days from the northwest—a precaution which we well know the value of since 1850.—*Correspondent S. F. Bulletin.*

LOSS OF LIFE ON THE STEAMER "SAN FRANCISCO."

THE steamer *San Francisco*, bound for this port, with United States troops on board, foundered at sea January 5th, 1854. The gale continued with more or less violence until the 31st of December, during which time two hundred and forty of the seven hundred human beings on board were swept from its decks and perished in the sea; among them, as persons of rank, were Colonel John M. Washington, Major Geo. Taylor, Captain H. B. Field, and Lieutenant R. H. Smith. The rest were rescued by the ship *Three Bells*, the bark *Kilby*, and the *Antarctic.—S. F. Mirror*, July 10, 1860.

HOW THE TIN MINES WERE DISCOVERED.

EAR the close of the year 1857, an old Indian chief, of the Cahuilla tribe, residing with Mr. Sexton, of San Gabriel, became sick, and felt himself dying. There was a secret on his mind which he wished to reveal to the man who had showed him so much kindness; he feared to do so, however, as it had been trusted to his faithful guardianship, and yet he felt it would eventually become known through the prying curiosity of the white man, who was penetrating every portion of the country, and from whom no secret could be much longer kept. Arguing thus with himself, and being anxious to benefit his friend by imparting to him the secret, he consulted his "medicine man," who was in attendance on him, but whose simples were now unavailing; meeting at first with opposition from this counselor, he had to overcome his scruples, but finally obtained his consent to comply with his orders, when he should pass away to the land of spirits. Having thus conciliated his counselor, he called to his side his generous friend Sexton, and informed him that as he was about to die, he wished to communicate to him a secret which would be the means of making him a rich man. He then informed him that he had given orders to his medicine man to conduct Sexton to the place where they obtained their medicine, saying that though only used by them as a medicine, he knew that the rock contained precious metal, and that he wished him to have the benefit of the knowledge of its existence, satisfied that the Americans would soon find out what it was, and its value. He was the last of his name and family, and there were none to whom his obligation bound him to transmit his long-cherished secret.

Accordingly, after the death of the old chief, Mr. Sexton, taking with him Mr. F. M. Slaughter, set out, with his Indian guide, to find the place where the medicine was ob-

tained. The Indian made his way to Temescal, then bore off to the mountains, and finally came to the base of Cajalco Hill. On reaching this place, the Indian seemed to be terribly exercised. Standing apart from his companions, he commenced uttering some strange sounds; shortly, he broke out into a sort of chant or lamentation; then he became agitated, his cries became louder and louder, his body became distorted, and, swaying to and fro, he fell to the earth. This he repeated. He then spread out his hands toward the east, then toward the west, and, in a moment, started off in a run up the hill in a straight line to a hole which was dug in the earth. Arriving at this, he went through pretty much the same gyrations and contortions; then he beckoned to the white men to come up—pointing to the hole as the medicine-hole. On being opened, it was found to be a mineral vein, and on being tested it proved to be tin. That lead is called "The Medicine Lead," on Cajalco Hill; and that is the manner in which a knowledge of its existence was brought to light. The "medicine" obtained from the rock was the oxide of copper.—*Los Angeles Star*, August, 1860.

THE CITY BY THE GOLDEN GATE.

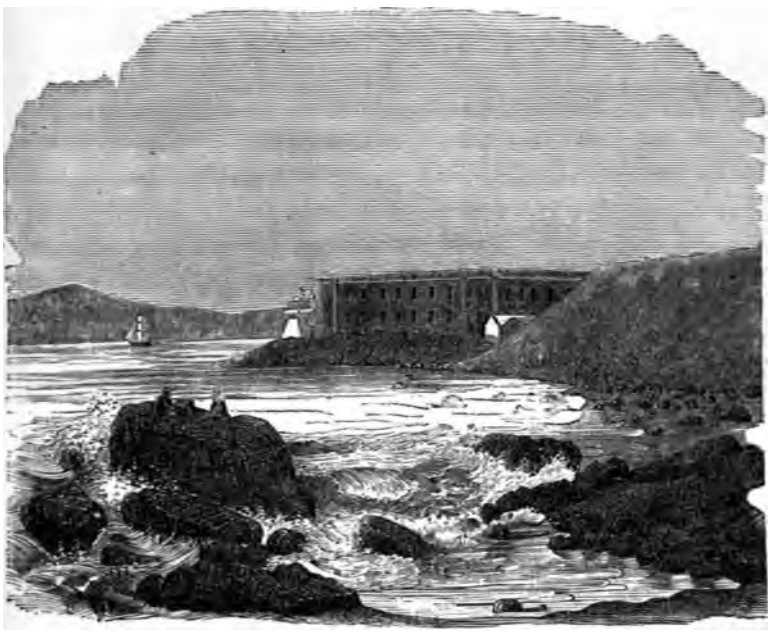
THE following poem, written by Ina D. Coolbrith, was read in San Francisco on the occasion of the celebration of the eighteenth anniversary of the admission of California into the Union, September 9, 1868:—

Little the goodly Fathers,
  Building their Missions rude,
By the lone, untraversed waters,
  In the Western solitude,

Dreamed of the wonderful city
  That looks on the stately bay,
Where the bannered ships of the nations
  Float in their pride to-day;

Dreamed of the beautiful city,
Proud on her tawny height,
And strange as a flower up-springing
To bloom in a single night;

For lo! but a moment lifting
The veil of the years away,
We look on a well known picture,
That seems but as yesterday.



SOUTH VIEW OF FORT POINT AND THE GOLDEN GATE.

The mist rolls in at the Gateway,
Where never a fortress stands,
O'er the blossoms of Saucelito
And Yerba Buena's sands,

Swathing the shores where only
The sea-birds come and pass,
And drifts with the drifting waters
By desolate Alcatraz.

We hear when night drops downward,
And the bay throbs under the stars,
The ocean-voices blending
With ripple of soft guitars,

With chiming bells of the Mission,
With passionate minors sung,
Or a quaint Castilian ballad
Trilled in the Spanish tongue.

Fair from thy hills, O city,
Look on the beautiful bay!
Prouder far is the vision
Greeting our eyes to-day;

Better the thronged waters
And the busy streets astir,
Purple and silken raiment,
Balsam and balm and myrrh—

Gems of the farther Indies,
Gold of thy own rich mine,
And the pride and boast of the peoples,
O beautiful Queen, are thine!

Praise to the goodly Fathers
With banners of faith unfurled!
Praise to the sturdy heroes
Who have won thee to the world!

That was a day to dream of—
That was a life we led;
Bleeding the veins of the mountains,
Draining the torrent's bed;

Searching the dusky cañon,
Tracking the pathless glen—
The shot, the knife, and the struggle
With savage beasts and men!

But blest in the rest that follows,
  Is thought of a labor past;
Blessed in the homes we have builded,
  The peace and the rest at last.

And blessed, indeed, the winter
  That nurses a smiling spring,
When hands that the seed have scattered
  May gather the blossoming.

SAN FRANCISCO EARTHQUAKES.

S these not very desirable visitors come to us with uncomfortable frequency, it becomes a matter of interest to inquire into the probability of their continued gentle demeanor, or whether some energetic *quake* may not, ere long, be rude enough to make a ruinous smash of things, and smother us in the crushed fragments of our own homes. As we live on a coast where volcanic agencies have left proofs of former activity, and where numerous hot springs and sulphurous emanations attest that their smoldering fires are not yet extinguished,—the event above contemplated falls largely within the limits of the *possible*. *But is it probable?*

Without stopping to investigate the theory of the *modus operandi* of earthquakes, I shall only allude to the fact of their occurrence in maximum force and frequency in the vicinity of volcanoes subject to alternate fits of repose and activity. They also linger for ages in such localities, after all other external volcanic manifestations have totally ceased; decreasing in strength and frequency as the hand of Time heals and smooths over breaks and ruptures, and soothes the subterranean fires by opening other and distant outlets,—until they come, finally, only at long intervals, in gentle tremblings, like an age-enfeebled warrior re-visiting his youthful battle-fields. Shocks of more or less violence precede volcanic eruptions, and ease off as the

craters open and the external flow of lava is established; proving their intimate connection with the pent-up fluid matters struggling to escape. The violence affecting any given point within the area of agitation is of course in proportion to its distance from the center of disturbance,—other conditions being equal. The irregular surface, the heterogeneous material and variable tenacity of the crust produce ever-varying effects upon different localities of a district simultaneously disturbed by a wide-spread force, causing the false appearance of many independent local actions. Local and circumscribed disturbances doubtless often occur; the earth-wave expanding concentrically from a central focus. These waves are, however, usually propagated along a line of maximum intensity, as in the course of a volcanic mountain chain.

The point of interest with us is to determine this central line of intensity in the matter of our own earthquakes. There are probably three or four of these lines, corresponding with the Sierras, the Coast Range, and a submarine range west of and parallel with the last named, along which lines our earth-waves travel; and from points within which local shocks radiate. If we take the number of heat-vents still existing, as a measure of intensity of the fiery activity lingering yet beneath these mountain ranges, we will find the Coast Range far exceeding the Sierras in that regard. The *submerged* range I infer to be far more active than either of the others. Its existence is matter of theory, based, however, on two strongly suggested facts. First, there *is* a sunken ridge, known as the Cortez Shoals, seventeen miles long, lying southwesterly and distant forty-six miles from the Island of San Clementes, and pointing in a direction parallel with the coast. It is suggested in the Report of the Coast Survey for 1862, that other similar developments might be looked for in a line with this. (See Coast Survey Report for 1862, page 286.) Second, this shoal, or sunken ridge, is *volcanic*, according to the statement of Captain Cropper, of the steamer Cortez, who reported seeing the eruptions. A volcanic product, boracic acid, is found in the sea-water from about this point northward along the

entire California coast, and even to Puget Sound. This unusual component of sea-water is found within a narrow belt along the shore, not more than thirty or forty miles wide,—rendering it probable that a line of volcanic emanations exists within the length and breadth of that space; rendering it probable, too, that Captain Cropper was *not* mistaken, as has been assumed, in his statement.

The Coast Range presents the same peculiarity of yielding boracic acid, along with the hot sulphurous waters of its numerous mineral springs. At a few points boracic salts exist to a very large extent, as at the well known "Borax Lake." The entire product of the Coast Range is insignificant, however, compared with the great submarine supply. The quantity is not sufficient to be detected in even the larger rivulets, draining the mountains, to say nothing of the rivers and the sea itself, into which they empty. Therefore, the presence of the acid in the shore waters of the ocean can not be accounted for on the hypothesis of being brought from the coast mountains.

The ocean supply can only be accounted for on the supposition of a submerged volcanic chain of considerable activity, yielding boracic acid in large quantity.

If the theory is correct, we may rationally locate the focus of disturbance of our hardest earth-shocks on this line. Although shocks doubtless emanate from the Coast Range line, yet their comparative strength and frequency would probably be in proportion to the relative activity of the two lines.

I therefore conclude, that San Francisco is removed considerably from the central disturbance of either the coast line or submarine line of earthquakes; that the intensity of the shocks will therefore be always greatly mitigated; and that the fury of the heaviest shocks will be expended on the sea waves thirty or forty miles from the shore; and therefore the shore is probably safe from any shock of very great destructive violence.

COURSE OF THE EARTH-WAVE.

Our shocks seem generally to come from the south and proceed north. If we imagine our earth-wave having its center of disturbance in the submerged line above-named, and moving along it toward the north, spreading out its wings on either side as it rolls onward, the result would be as the shore wing passed under San Francisco, to sway perpendicular objects first to the north, or perhaps to the northeast, and then back again, uplifting at the same time. Two or more of such movements might occur, and then would follow the reactionary wave falling in the wake of the central disturbance, to fill up, as it were, the depression produced by its onward movement. This would cause an inclination of perpendicular bodies, first toward the west and then toward the east, nearly at right angles with the first movements. These two classes of movements are actually observed in most cases where both the initial and closing motions are noted. They prove conclusively that the center of disturbance passes on one side, and not *under* the city; for in the latter case the movement would be only back and forth in the direction of the passing wave.

Shocks, where the first heave is toward the north and east, probably are located in the marine line of disturbance, the wave moving north; those giving a southwest heave probably come from the coast line, the wave moving in the same direction.

It is to be regretted that no systematic mode of observation has heretofore been applied to these interesting phenomena. It is to be hoped some of our scientific men may have the means and leisure ere long to establish some mode of noting, with comparative accuracy, the details of earthquake action.—Dr. JOHN A. VEATCH, in the *S. F. Mining and Scientific Press, San Francisco*, March 31, 1868.

CALIFORNIA CHILDREN.

THE children of California are certainly a great improvement upon those not born among us. Nowhere can more rosy specimens of health and beauty be found. Strong-limbed, red-blooded, graceful, and as full of happy animal life as young fawns, they bid fair to develop into admirable types of manhood and womanhood. To them, loving their native soil with no acquired love, knowing no associations which are not linked with its blue skies and its yellow hills, we must look for its proper inhabitants, who will retain all that is vigorous, earnest, and generous in the present race, rejecting all that is coarse and mean. For myself, in breathing an air sweeter than that which first caught the honeyed words of Plato—in looking upon lovelier vales than those of Tempe and Eurotas—in wandering through a land whose sentinel peak of Shasta far overtops the Olympian throne of Jupiter—I could not but feel that nature must be false to her promise, or man is not the splendid creature he once was, if the art, the literature, and philosophy of ancient Greece are not one day rivaled on this last of inhabited shores!—*Bayard Taylor*, July, 1860.

CALIFORNIA POETS.

WE suppose that Eastern literati will smile derisively at the assumption that poets are discoverable in this far-off West, which, in their imagination, is much associated with bowie-knives and buckskin wardrobes; but we shall endeavor occasionally to present a sample of domestic manufacture, which, if the critics can be divested of strong prejudice, may, possibly, induce them to confess that among the monstrosities of this coast, a maker or two of good verse may be found. If we could delude them by assurance that the following poem was written by Tennyson, or some renowned foreigner, we have not a doubt but what

it would be pronounced prodigiously fine; but, unhappily, it was not; it was constructed by a miner, away up in the lonesome defiles of Trinity Mountain—a poet who blends invocation of the Muses with the uses of the pick and ax, and who, smiting the unyielding rock, *thinks* as tenderly, and beautifully, and grandly as though the world were to catch up every syllable with acclamation. L. F. WELLS is a true poet, and he it was who wrote the song of

MARY BROWN.

She dwelt where long the wintry showers
  Hold undisputed sway,
Where frowning April drives the flowers
  Far down the lane of May.
A simple, rustic child of song,
  Reared in a chilling zone,
The idol of a household throng—
  The cherished one of home.
None sang her praise, or heard her fame
  Beyond her native town;
She bore no fancy-woven name,
  'Twas simple Mary Brown.

Her eyes were not a shining black,
  Nor yet a heavenly blue,
They might be hazel, or, alack!
  Some less poetic hue;
Indeed, I mind me, long ago,
  One pleasant summer day
A passing stranger caught their glow,
  I think he called them gray.
Yet when with earnestness they burned,
  Till other eyes grew dim,
Their outward tint was ne'er discerned,
  Their spell was from within.

A novelist, with fancy's pen,
  Would scarcely strive to trace
From her a fairy heroine
  Of matchless mein and grace.

A model for the painter's skill,
Or for the sculptor's art,
Her form might not be called; yet still
It bore a gentle heart;
The while it fondly treasured long
Love's lightest whispered tone,
In other hearts she sought no wrong,
She knew none in her own.

Though never skilled in fashion's school,
To sweep the trembling keys;
Or strike the harp by studied rule,
A listening throng to please;
Yet still when anguish rent the soul,
And fever racked the brain,
Her fingers knew that skillful touch
Which soothed the brow of pain—
And widow thanks and orphan tears
Had owned her tender care,
While little children gathered near
Her earnest love to share.

I might forget the queenly dame
Of high and courtly birth,
Descending from an ancient name
Among the sons of earth;
I scarce recall the dazzling eyes
Of her the village belle,
Who caused so many rural sighs
From rustic hearts to swell;
Yet never can I cease to own
While future years shall roll,
Thy passing beauty, Mary Brown—
The beauty of the soul.

TRINITY RIVER, August, 1858.

San Francisco Mirror, September 3, 1860.

THE BEAUTIFUL.

MEN are so inclined to content themselves with what is commonest, the spirit and the senses so easily grow

dead to the impression of the beautiful and perfect, that every one should study to nourish in his mind the faculty of feeling these things by every method in his power. For no man can bear to be entirely deprived of such enjoyments; it is only because they are not used to taste of what is excellent, that the generality of people take delight in silly and insipid things, provided that they be new. For this reason, one ought every day at least to hear a good song, read a good poem, see a fine picture, and, if it be possible, to speak a few reasonable words.—*Goethe.*

POEM, BY JOHN R. RIDGE, ON THE LAYING OF THE ATLANTIC TELEGRAPH CABLE.

Read at Marysville, September 27, 1858.

Let Earth be glad! for that great work is done,
Which makes, at last, the Old and New World one!
Let all mankind rejoice; for time nor space
Shall check the progress of the human race!
Though Nature heaved the Continents apart,
She cast in one great mold the human heart;
She framed on one grand plan the human mind,
And gave man speech to link him to his kind:
So that, though plains and mountains intervene,
Or oceans, broad and stormy, roll between,
If there but be a courier for the thought,
Swift-winged or slow, the lands and seas are naught,
And man is nearer to his brother brought.

First, ere the dawn of letters was, or burst
The light of science on the world, men, nursed
In distant solitudes apart, did send
Midst lurking foes and dangers without end,
Their skin-clad heralds forth, to thread the woods,
Scale mountain peaks, or swim the sudden floods,
And bear their messages of peace or war.
Next, beasts were tamed to drag the rolling car,

Or speed the mounted rider on his track.
And, then came, too, the vessels oar-propelled,
Which fled the ocean as the clouds grew black,
And safe near shore their prudent courses held.
Next came the winged ships, which, brave and free,
Did skim the bosom of the bounding sea,
And dared the storms and darkness in their flight—
Yet, drifted far before the winds and night,
Or lay within the Dead Calm's grasp of might.
Then, sea-divided nations nearer came,
Stood face to face, spake each the other's name,
In friendship grew, and learned the truth sublime,
That man is man, in every age and clime!
They nearer were, by months and years—but space
Must still be shortened in Improvement's race;
And STEAM came next, to wake the world from sleep,
And launched her black-plumed warriors of the deep;
The which, in calm or storm, rode onward still,
And braved the raging elements at will.
Then distance, which, from calms' and storms' delays,
Grew into months, was shortened into days,
And Science' self declared her wildest dream
Reached not beyond this miracle of steam!
But, STEAM hath not the lightning's wondrous power,
Though Titan-like midst Science' sons it tower,
And wrestle with the ocean in his wrath,
And sweep the wild waves foaming from its path.
A mightier monarch is that subtler thing
Which gives to human thought its thought-swift wing;
Which speaks in thunder, like a God,
Or humbly stoops to kiss the lifted rod;
Ascends to Night's dim, solitary throne,
And drapes it with a splendor not its own—
A ghastly grandeur and a ghostly sheen,
Through which the pale stars tremble as they're seen;
Descends to fire the far horizon's rim,
And paints Mount Ætna in the cloudland grim;
Or, proud to own fair Science' rightful sway,
Low bends along the electric wire to play,
And, helping out the ever-wondrous plan,
Becomes, in sooth, an errand-boy for man!

This power it was, which, not content with aught
As yet achieved by human will or thought,
Disdained the slow account of months or days,
In navigation of the ocean-ways,
And *days* would shorten into *hours* and *these*
To *minutes*, in the face of angered seas!
If thought might not be borne upon the foam
Of furrowing keel, with speed that thought should roam,
It then should walk, like light, the ocean's bed,
And laugh to scorn the winds and waves o'erhead!
Beneath the reach of storm or wreck, down where
The skeletons of men and navies are,
Its silent steps should be; while o'er its path
The monsters of the deep, in sport or wrath,
The waters lashed, till, like a pot should boil
The sea, and fierce ARION paw th' up-cast spoil!

America! to thee belongs the praise
Of this great, crowning deed of modern days;
'Twas FRANKLIN called the wonder from on high—
'Twas MORSE who bade it on man's errands fly—
'Twas he foretold its pathway 'neath the sea—
A daring FIELD fulfilled the prophecy!

'Twas fitting that a great, free land, like this,
Should give the Lightning's voice to Liberty;
Should wing the heralds of earth's happiness,
And sing, beneath the ever-sounding sea,
The fair, the bright millennial days to be.

Now may, ere long, the sword be sheathed, to rust,
The helmet laid in undistinguished dust;
The thund'rous chariot pause in mid career,
Its crimsoned wheels no more through blood to steer;
The red-hoofed steed from fields of death be led,
Or turned to pasture where the armies bled;
For nation unto nation soon shall be
Together brought in knitted unity,
And man be bound to man, by that strong chain,
Which, linking land to land and main to main,
Shall vibrate to the voice of Peace, and be
A throbbing heart-string of HUMANITY!

THE OLD GIANTS OF CALIFORNIA.

THERE were giants once on this coast, all the denials of savans and doubters, notwithstanding. Not less than four well-known cases have been noted of the discovery of the remains of the giant Californians of Sierra Nevadas, to wit: First—a skull bone was found in Trinity County in 1856: second—there were found in Tuolumne County, in 1860, a thigh bone and skull of a man twelve feet high: third—there were discovered near Jacksonville, in Southern Oregon, in May, 1862, a pair of human jaw bones of the immense breadth of seven inches; and fourth—there were discovered in 1762, near the Mission of Ignacio de Kadakaman, in latitude twenty-eight degrees north, on the Pacific coast of Lower California, the vertebræ, skull, ribs, &c., of a man eleven feet in height, which were found by one of the old Jesuit priests. These accounts, with several others on the human fossils of California and Mexico, as disinterred by the gold miners with their wonder-working water machinery, may be found in the "Notes on the Indians of California," now in the course of publication in the *Farmer* of San Francisco. Such remains of the ancient races ought to be preserved. The skull or other remains of a giant *twelve feet high*, is worth its weight in gold, in London or Paris.—*San Francisco Bulletin.*

NORTHERN GOLD DISCOVERIES.

THE first intimation that gold existed in Eastern Oregon, Washington, and what is now Idaho Territories, by a white man, is said to have come from Capt. Pierce, from whom Pierce City since took its name. As early as 1852, while on a trading expedition with the Nez Perces, he became satisfied that this was a gold bearing country, but the hostility of the Indians prevented him in various attempts to test the truth in his belief until as late as 1860, while, in the mean time, when the captain resided in California, Mr.

Robbins, of Portland, purchased ten dollars' worth of gold dust from a Spokane Indian, in 1854, which led to prospecting in that country, and in 1855, some Frenchmen and half-breeds from Oregon, struck the Colville mines. During this year the Indian war very nearly put a stop to prospecting until as late as '58, when Captain Pierce again arrived in the country, and attempted to prospect the Nez Perces country, but found the Indians hostile, and suspended operations until 1860, when a party of some ninety men went into the Oro Fino district, and finding—as they anticipated—good diggings, they wintered there. In 1861 Oro Grande and South Clearwater were discovered, and late in the fall the rich Salmon River placers. During the year 1861 valuable deposits were developed on Powder, John Day's, and Burnt rivers, and in 1862, the greatest and most important mineral district of all was brought to light in the discovery of the Boise Basin. Meanwhile Beaver Head and Big Hole were found, east of the Rocky Mountains.—*Boise News.*

THE GOLDEN HEGIRA.

T the date of the discovery of America the whole amount of gold in commercial Europe was estimated at $170,000,000. During the succeeding one hundred and twelve years, the opening of new fields of supply added about $6,387,500,000, so that had there been no loss nor shipments, there should have been at the commencement of the present century $6,557,500,000 in the commercial world. If to this we add the enormous receipts from California and Australia, developed in late years, and the continued supplies drawn from the older fields, the statement will seem incredible that instead of accumulating, the stock of gold in Europe is actually on the decrease. The inquiry then naturally arises, what becomes of the precious metal?

In a paper read before the Polytechnic Association, Dr. Stephens stated that of our annual gold product, full fifteen

per cent. is melted down for manufactures; thirty-five per cent. goes to Europe; twenty-five per cent. to Cuba; fifteen per cent. to Brazil; five per cent. direct to Japan and the Indies—leaving but five per cent. for circulation in this country. Of that which goes to Cuba, the West Indies and Brazil, full fifty per cent. finds its way to Europe, where, after deducting a large percentage used in manufacturing, four-fifths of the remainder is exported to India. Here the transit of the precious metal is at an end; here the supply, however vast, is absorbed, and never returns to the civilized world.

The Orientals consume but little, while their productions have ever been in demand among the Western nations. As mere recipients therefore, these nations have acquired the desire of accumulation and hoarding, a passion common alike to all classes among the Egyptians, Indians, Chinese and Persians. A French economist states that in his opinion the former nation alone hide away $20,000,000 of gold and silver annually, and the present Emperor of Morocco is reported as so addicted to this avaricious mania that he has filled seventeen large chambers with the precious metals. The passion of princes, it is not surprising that the same spirit is shared by their subjects, and it is in this predilection that we discover the solution of the problem as to the ultimate disposition of the precious metals. This absorption by the Eastern nations has been uninterruptedly going on since the most remote historical period. According to Pliny, $100,000,000 in gold was in his days annually exported to the East. The balance of trade in favor of these nations is now given as $90,000,000 annually.

Actual loss to the world, to a great amount, is yearly caused by sinking in the ocean, and in some of the processes employed in the arts, as plating and gilding. In concluding, an estimate concerning the actual loss of coin in circulation by abrasion may be proper. In a report made by the United States Mint a few years since, is given the following results of some careful and comprehensive experiments made at the Mint to ascertain this loss, showing that waste of gold and silver by this cause has been

generally over estimated. "On our silver coins, taken promiscuously, the average amount of loss from abrasion was ascertained to be one part in 3,550; the double eagle one in 9,000; and a careful estimate as to the proportions of the various sizes of coins actually in circulation in the United States, made of two metals, led to the conviction that the yearly loss does not exceed one part in 2,400."

OUR BABY.

In the cradle, here by me,
Something fair reposes,
Whiter than the lilies be,
Sweeter than the roses.

On the pillow soft is laid
Something young and tender,
Stainless brow and shining head,
Fingers white and slender.

Lids like snow-flakes, drooped above,
Eyes like summer blossom,
Lips a rosebud, made for love,
Dimpled cheek and bosom.

Fairest flowers from forest dell,
Dearer for their fleetness,
Waxen bud and lily bell
Best befit his sweetness.

Much we wonder, when he sleeps,
What his eyes are seeing,
Knowing well that angels keep
Watch about his being.

For a moment round his eyes
Radiant smiles are beaming,
Then he starts with grieving cries—
Is the baby dreaming?

Gentle shepherd! who dost hold
In thy tender keeping
All the lambs within thy fold,
Waking or in sleeping;

We are weak who fold the child
In our fond caressing;
Grant to crown our undefiled,
Thy divinest blessing.

SCENERY OF THE SAN JOAQUIN VALLEY.

THE San Joaquin valley may be said to possess no picturesque scenery. Like the prairies of the West, it is a vast undulating plain or dead level, with an occasional tree or park of oaks to diversify the general monotony. No timber of account springs up along the streams, no thickets of green shrubbery relieve the eye, no murmuring rills disturb the ear, but through the fervid plains of autumn the waters sluggishly wander ladened with the ochery sediment of distant placer mines. Yet within the sight, at a slight elevation above the horizon, the view changes. The mountains rise in Olympian majesty, their bases running off into gentle slopes or rugged spurs, cut up into innumerable configurations of landscape, while their dull brownish outline is relieved by groves of evergreen timber, and their upper summits are sparkling with snow or lost in the empyrean vault of heaven. If the flatness and tameness of the valley is insipid, the grandeur of the mountain scenery inspires a feeling of awe and sublimity. Yet the valleys, for a few months of the early year, have a tranquil, modest beauty in their verdurous monotony; but nothing is more desolate than the plains in the autumn months, when the herbage has been scorched sere and brown, and even the homely fact of its still-existing nutritious qualities does not recompense for the lack of inspiring influences the scene gives to nature. Seen in this phase, so

different from all home associations, one wonders not that the early adventurers never dreamed of the riches slumbering in the soil—which wore so unprepossessing an aspect—but only believed in the mineral wealth they came to seek. The wonder of the Alpine scenery, the Yosemite Falls, on the head-waters of the Merced, are the most picturesque and elevated cataracts in the world. The Merced, a stream of considerable magnitude, precipitates itself at the first fall a sheer perpendicular descent of 1,600 feet, and a succeed-

NIGHT SCENE ON THE SAN JOAQUIN RIVER.

ing fall is 434 feet. There are other falls—one of 700 feet, another of 750 feet, and a third of 300 feet, on a branch of the same stream. They are in the region of elevated peaks and rugged precipices, one of which has a perpendicular descent of 4,000 feet. In this region, and the mountain region for two hundred miles, the most sublime Alpine scenery is to be found, which annually attracts many curious visitors. The Coast Range does not exceed an average altitude of 3,000 feet, and in fertile portions is covered to the summit with wild indigenous oats, that give to them in the spring

season a peculiarly lovely grandeur. The plains, at this season, are clothed in green verdure, into which intermingles the golden lily and myriads of native wild flowers; and the cheerful pipings of the lark, quail, and myriads of feathered songsters, make the air vocal with their notes. In the Tulare country, along the Kahweah and King's rivers, the virgin soil gives growth to beautiful groves of cottonwood and sycamore, and their margins are fringed with perennial verdure. Climate and soil conspire to give birth to the most picturesque sylvan scenery and grandest monuments of Nature. Here will become, in future years, the tropical Paradise of California.—*Stockton Independent*, April 27, 1868.

THE RESULTS OF THE CALIFORNIA STATE GEOLOGICAL SURVEY OF 1864.

IRST. It has been ascertained that the gold deposits of the State lie not in the silurian rocks, which were previously considered to be the basis of all rich auriferous regions, but in the jurassic or triassic lithological formations of later date.

Second. It has been ascertained that the coal region of California lies not in the tertiary rocks, as was previously supposed, but in the cretaceous, the highest portion of the secondary era.

Third. All the rich gold mines of the State are found in the jurassic and triassic rocks; all the valuable coal and quicksilver in the cretaceous.

Fourth. The limits of the jurassic and cretaceous have been traced with tolerable accuracy over most of the area of the State.

Fifth. The metallurgical processes used in our gold mines were carefully studied and described a year or two ago, but the work must be rewritten to bring it up to the present advanced stage of that branch of industry.

Sixth. All the principal high points of the State, long known, have been ascended, their geological character examined, and their precise altitude ascertained.

Seventh. It has been ascertained that Mount Shasta is not the highest point in the State.

Eighth. A large district, previously unheard of by the public, has been found to rise to a height of eleven thousand feet or more, with a hundred peaks that rise about thirteen thousand feet, and a general elevation, extent, and grandeur of scenery that surpass Switzerland.

Ninth. Cañons have been found deeper and longer than Yosemite.

Tenth. The Big Tree has been found to exist, not merely in a few isolated groves, as was supposed, but in extensive forests, with tens of thousands of trees, along a considerable portion of the Sierra Nevada.

Eleventh. Large bodies of excellent pasturage were found in places previously unknown to the whites.

Twelfth. It has been ascertained to the satisfaction of Professor Whitney, that the men and mammoths, whose bones are found deep in the hills of the mining districts, lived together in the same age, and their remains were buried side by side in the same natural convulsions, which happened many thousands, perhaps hundreds of thousands, of years ago.

Thirteenth. An extensive collection of minerals, vegetables, and preserved or stuffed animals has been obtained, and will be prepared for exhibition so soon as the State prepares a proper place for it.

Fourteenth. The people of this State have shown their desire to understand the nature of their country, and they will be respected abroad for their enterprise, liberality and judgment in carrying out this important work.

CALIFORNIA PRICES IN 1849.

COPY of a bill of fare of a fashionable eating-house in San Francisco, at the end of 1849:—

BILL OF FARE—WARD HOUSE.

RUSSELL & MYERS.... .....PROPRIETORS.

Thursday, December 27, 1849.

SOUP.

Ox Tail..... $1 00

FISH.

Baked Trout, White and Anchovy Sauce..... $1 50

ROAST.

Beef.....	$1 00	Mutton, stuffed.....	$1 00
Lamb, stuffed.....	1 00	Pork, Apple Sauce.....	1 25

BOILED.

Leg Mutton, Caper Sauce.....	$1 25	Corned Beef and Cabbage.....	$1 25
Ham.....	$1 00		

ENTRÉES.

Curried Sausages, *a mie*.....	$1 00
Beef, stewed with Onions.....	1 25
Tenderloin Lamb, Green Peas.....	1 25
Venison, Port Wine Sauce.....	1 50
Stewed Kidney, Sauce de Champagne.....	1 25

EXTRAS.

Fresh California Eggs, each..... $1 00

GAME.

Curlew, roast or boiled, to order..... $3 00

VEGETABLES.

Sweet Potatoes, baked.....	$0 50	Irish Potatoes, mashed.....	$0 50
Irish do. boiled.....	0 50	Cabbage.....	0 50
Squash.....	$0 50		

PASTRY.

Bread Pudding.....	$0 75	Rum Omelette.....	$2 00
Mince Pie.....	0 75	Jelly do.	2 00
Apple Pie.....	0 75	Cheese.....	0 50
Brandy Peach.....	2 00	Stewed Prunes.....	0 75

WINES.

Champagne.....	$5 00	Claret.....	$2 00
do. half bottles.....	3 00	Champagne Cider.....	2 00
Pale Sherry.....	3 00	Porter.....	2 00
Old Maderia.....	4 00	Ale.....	2 00
Old Port, half bottles.....	1 75	Brandy, per bottle.....	2 00

BREAKFAST—From half-past 7 to 11 A. M.
DINNER—From half-past 1 to 6 P. M.
TEA—From half-past 6 to 12.

Pioneer Magazine.

A GREAT ORATORICAL FEAT.

ONE of the most remarkable feats of endurance in a speaker which we remember ever to have heard of, comes to us from Victoria, Vancouver Island. In the legislative assembly of that place, we are told that Leonard McClure spoke seventeen hours without pausing or sitting down. To those who are unacquainted with the circumstance, this feat might not unreasonably appear proper to be placed in the same category with the exertions of those ambitious pedestrians who, for wagers, walk a thousand miles in a thousand hours. It may easily be supposed that McClure's speech could not have been a masterpiece of oratory, nor is it likely that his inducement was greater than that which moved Edmund Burke, when, at the trial of Warren Hastings, after pouring out for fourteen hours a torrent of impassioned eloquence, the majestic mind collapsed under the force of physical fatigue, and he fell fainting into the arms of Sheridan. But we know of no instance of stubborn tenacity equal to this of McClure's, and the cause was one which should make him famous in the annals of the British colonies. A year ago a large quantity of land in and about Victoria was seized by the Government for arrears of taxes, and was by it held on the understanding expressed and published, that the owners could have and repossess their lots by paying the taxes within a twelvemonth of the seizure. But it became known a few days before the expiration of the allotted term that a plot was on foot, hatched by the Government and backed by a venal majority of the House of Assembly, to pass a bill authorizing the executive to repudiate its contract with the land-owners, refusing to accept payment of arrears and seizing upon and retaining permanently the disputed lots. Two men in that House opposed that measure. Their names were Amor de Cosmos and Leonard McClure. They knew that they had nothing to hope from their compeers or from the Government, and they prepared

themselves accordingly. The House had made up its mind, with these two exceptions, to rush through the obnoxious bill on the day before the twelvemonth expired. There was but one way to prevent this, and it was adopted resolutely. On the House being opened, McClure rose to his feet, the time being noon, and kept the floor until five o'clock the following morning. For seventeen hours he continued to speak, whilst every effort was made by the purchased majority to put him down and to tire him out. With a merciless unanimity they refused to allow him to lean against a table, to put his foot upon a chair for a moment, to relieve the irksomeness of his position by resting his hand upon any thing, or to speak, in short, in any other than a rigidly erect and unsupported attitude. During the whole of the time they relieved each other at intervals, going out and procuring such refreshment as they needed, and always leaving a quorum in the House. When McClure sank exhausted into his seat, as the light of another morning was stealing into the windows of the Assembly-house, De Cosmos rose, and for the remaining seven hours of the twenty-four talked against time. On rising, amid the groans and hisses of the disgusted and infuriated majority, he exclaimed, with more force than refinement, that it was useless for honorable members to evince their malice in that manner, for he had got up with the determination to talk, if necessary, "until the angel Gabriel sounded the last trump." His powers of endurance were not quite so severely tested, but the end was achieved, and when the clock struck twelve the worn and wearied champions of honesty looked round with pardonable exultation upon the blank faces of a bought and beaten Assembly.—*S. F. Examiner.*

LAKE TAHOE.

THE editor of the *Spirit of the Times*, who has recently visited Lake Tahoe, gives the following well-written and exceedingly interesting description of it [Editor *San Francisco Bulletin*, November 16, 1867]:—

Lake Tahoe burst upon our vision in all its magnificence and beauty. Among the Indians the name of this lake is still a matter of dispute. Some of them contend that Lake Tahoe is, properly speaking, Was-Soo Lake, and that the lake in Washoe Valley, twelve miles from the northern shore of Tahoe, is Tule, and not Washoe. Tule, in Indian, is pronounced like Sawyer, or, as they are supposed to spell it, Tsau-er. It is certainly true that the lake in Washoe Valley is surrounded with tules, which undoubtedly gives rise to the supposition in respect to it on the part of the Indians. The Indians say that Tahoe means big lake, while those who have a smattering of the Indian tongue insist that its significance is deep water; and others, again, say it means fish lake. But what's in a name, comes with peculiar force in connection with the subject of which we write; for even if this lake never had a name, even if it had one with each change of the moon, or if eternity should surround it, and it should flow back into the channels of the unknown, it could never add to or detract from its glorious beauties, grandeur, and magnificence; for, when the Saviour of men went up on to the mountain-top and wept, it seems that at such a spot, where so much holy beauty and purity dwells, his tears must have flowed. Such glory of scenery, situation, and beneficial results could not have been placed there except by divine hands. We have seen paintings of this lake by artists of natural and acquired ability, who love their art and study to make it perfect, but when you come to contrast them with the grand reality, it does not take the eye of a connoisseur to detect the defects. Descriptions, too, fail to convey the true loveliness of the spot, and although we, in common with those who are fortunate enough to have the leisure to

linger on its shore, enter the list to place our humble tribute to its merits on record, yet those who come after us will say, "How far wide of the mark he came!"

When we first saw this lake, we thought of all the different scenes of land and water view which we had ever visited, and none could compare in beauty to that before us, except Niagara, though the beauty of the falls and the lake are dissimilar—the former stormy and gigantic in its grandeur, while the latter is as peaceful and placid as an infant's smile, though at times it is something like an infant in the suddenness of its squalls. Here, at an altitude of 6,218 feet above the level of the ocean, reposing in the strong embrace of dark and frowning mountains and laving the feet of craggy hills, lies a sheet of water, from the lovely bosom of which the roughest nature might draw inspiration. It is in the form of a parallelogram, the lines on the northern and southern shore being distinct and similar. It lies north and south, or, more closely speaking, a little northeast and southwest. It is twenty-three miles in length and fifteen in width. The water is tri-colored, if we may use the expression in connection with it. For half a mile from the shore (which is of a soft, fine sandy beach), the color is a most beautiful pea-green, tinged with blue, and as clear as crystal, objects on the bottom being as distinct as if immediately before you. For half a mile farther it changes to a green about two shades darker, still with the bluish tinge, but as clear as before. One can hardly imagine that the bottom is so far removed, as it looks as if it could be stood on with the head out of the water. From the last color it changes instantaneously to the deepest color of indigo blue. The density of this color is wonderful, but the lines of the three colors are as distinctly drawn across the lake, from north to south, as if painted there, and when the sun shines upon it in the afternoon, they are more distinct than at any other time. The water of the lake is purity itself, but on account of the highly rarefied state of the air it is not very buoyant, and swimmers find some little fatigue; or, in other words, they are compelled to keep swimming all the time they are in the water.

The depth of the water is very deceptive. From the northern shore, and, to a certain extent, from the southern shore, a person may wade a long distance and not find it above the chin, but it makes depth very quickly. Measuring from the latter point, just at the confluence of the dark green and blue line, the water is 81 feet in depth, and immediately (the distance between the two soundings being almost imperceptible) it falls to a depth of 269 feet; then 593 feet; at a farther distance, 953 feet; and at a distance of above three miles from the shore, 1,253 feet, with a hard, sandy bottom. These soundings were taken from south to north, and, after the last was obtained, there were fifteen taken, one mile apart, with the following result:—1,294 feet, bottom sandy; 1,415 feet, fine mud; 1,432 feet, fine mud and sand; 1,499, 1,494, 1,478, and 1,488 feet, fine mud bottom. The greatest depth found, with a bottom the same as the last, 1,523 feet, then 1,521 feet, with the same bottom. The depth was then 1,242 feet, with a bottom of rock and mud; 560 feet, sand and mud; 83 feet, rock and sand; 48 feet, gravel; 23 feet, sand, rock, and bowlder bottom, the bowlders being clearly discernible at a depth of 81 feet. The soundings, as a matter of course, do away with the idea that the lake is bottomless; and, although the greatest depth is impenetrable and of a sufficiency to drown, there is a feeling of pleasure (!) to think that, though one may never return above from an involuntary exploration of its hidden depths, the body *will* have a resting-place, however "lowly" it may be.

The scenery around Lake Tahoe is unexcelled in magnificence. Standing on its southern shore, listening to the regular beat of the surf, as the ceaseless motion of the water would cause it to advance and retreat, watching the light and graceful boats as they shoot across its dangerous depths; the receding sun arrayed in all the gorgeousness of his evening drapery, and as the shades of night commenced their gradual approach, no scene could have been more entertaining. To the west, the cold and sterile mountains rose in majesty, their tops covered with eternal snow, fringed with a slight blush from the red clouds above, and resting against the sky, with a profile so clear and well

defined as if cut with a sculptor's chisel. To the north and east, mountain and hill rose up, as if on guard to protect the beauties of the place, and thick forests of fir, balsam, pine, and oak trees, like regiments, straight and luxuriant, marched almost to the sandy beach with full ranks.

One, two, or three views of the splendors of the place will not suffice, and to us this was practically demonstrated on this our second visit. New beauties constantly unfold themselves, and although it may be thought that one glance comprehends it all, the looker-on is astonished at the freshness of the scene, and wonders that he neglected to look at the new point of beauty when there before. At times a gentle breeze wafts across the bosom of the lake, but at others its surface is as fretful as an unruly child. The waters become agitated, the white-crested waves dance and sparkle, and all the wondrous mysteries of the storm-tossed ocean are in miniature here. Sudden gusts of wind sweep down through the narrow gorges and across the lake, and the quick eye of the good sailor convinces him that all sail must be taken in. Happy excursionists, when starting, wonder, as they move across the "deep, deep blue," whether the "white water" will be reached before the wind gets to be very severe. We must confess to a little fear at the deep blue water. It is so impenetrable—so mysterious looking—so reserved and unsocial. It reflects back no sparkle of the eye, or lineament of the face; but it is deep and fearful in the density of color. About three-quarters of Lake Tahoe lies in California, running to within four miles of the southeast end of the lake, the balance being in the State of Nevada. The trout have not been very plentiful this season, probably arising from the fact that the Indians spear them as they are in the very act of spawning. This drives both the male and female away, and the trout seek the deep water, and seldom come in view. The law in regard to this matter should be stringent, or Tahoe, as a trouting lake, will become obsolete.

ORIGIN OF DAY AND MARTIN'S BLACKING.

ONE afternoon Day, then a poor workman, was drinking his mug of half-and-half in a London ale-house, when a poor and ragged individual entered, and addressing himself to those present, said:

"Who will give me a pint of ale for a good recipe for blacking?"

"I will," said Day, and he ordered the pint of ale for the new-comer.

"Now let us have it," said he, and his new friend gave him the desired document.

"Good!" said Day; "now I will give you another pint," which the unknown drank and then took his leave.

The next morning Day sought one of his friends, a commercial traveler named Martin, and showed him the recipe. They made a quantity of the blacking, and filled all the old bottles they could obtain with the mixture.

This done, a friend of the partners went to all the grocers and blacking merchants of London, and addressed to each one the question, "Have you Day & Martin's blacking?"

And all the shopkeepers, naturally enough, answered, "No."

The next day another friend went the rounds, and to each merchant he propounded what his predecessor had done, and in each case he received the same answer.

The next day another friend went to each merchant, but this time the question was, "Would you like to buy some of Day & Martin's blacking?"

And all the merchants answered, "Willingly." And the fortune of the house of Day & Martin was made. They adopted for their labels the picture of a cat enraged at seeing his image reflected in the polished surface of a boot, as in a mirror, and this label has become world famous. It only remains to be said that Day, on the occasion of his daughter's marriage, was enabled to give her as a wedding gift, the nice little sum of two hundred thousand dollars,

which was a good deal in those days.—*Translated from the Paris Temps.*

THE RUBY HEART.

UNDER a fragrant blossom-bell
A tiny Fairy once did dwell,
The moss was bright about her feet,
Her little face was fair and sweet,
Her form in rainbow hues was clad,
And yet the Fairy's soul was sad;
For, of the Elves that round her moved,
And in the yellow moonlight roved,
There was no spirit that she loved.

Many a one there was, I ween,
Among the sprites that danced the green,
Whose hands were warm to clasp her own,
And voices kindly in their tone;
But love, the fondest and the best,
Awaked no answer in her breast:
Her heart unmoved within her slept—
And "I can never love!" she wept.

She taught herself a quaint old song,
And crooned it over all day long:

"He prayeth best who lovest best
All things, both great and small;
For that dear God that loveth us,
He made and loveth all."

"But I," she said, "can never pray,
Nor to his mansions find the way,
For he will suffer not, I know,
A creature unto him to go
Who has not loved his world below."

Slow wandering by the brook alone,
She chose a pure white pebble-stone,
And carved it, sitting there apart,
Into a little marble heart;

She hung it by her mossy bed—
"My heart will never love," she said,
"Till this white stone turns ruby red."

One night a moonbeam smote her face
And wakened her, and in its place
There stood an angel full of grace.
"Dear child," he said, "from far above
I come to teach thee how to love.
Do every day some little deed
Of kindness, some faint creature feed,
Make some hurt spirit cease to bleed;
Then carve the record fair, at night,
Upon thy heart of marble white.
Each word shall turn so ruby red,
And so much of thy task be sped;
For when the whole is ruddied o'er,
Thy bosom shall be cold no more;
The souls thy careless thoughts contemn
Shall win thee by *thy* deeds to *them*."

Upon the sorrowful Fairy broke
Like sudden sunshine this new hope.
Each day to some one's door she took
A kindly act, or word, or look,
Whose record, fairly carved at night,
Blushed out upon the stony white;
Till, somehow, wondrously there grew
More grace in every one she knew—
Each little ugliness concealed,
Each goodness more and more revealed—
As, when you watch the twilight through,
The sky seems one pure empty blue,
Till o'er the paling sunset bars,
Suddenly 'tis one sweep of stars!

So, day by day, she found herself
Grow kindlier to each little elf;
Yea, even to the birds and bees,
And slender flow'rets round her knees;
The very moss-buds at her feet
She came with warmer smile to greet,

[illegible]

E. R. Sill.

EARLY ENGLISH IN CALIFORNIA.

THE DUEL.

EUREKA, in its youthful days, like most juveniles born to plenty of money and few cares, was a most hilarious village. Free fights were common, and the soft notes of Colt's persuaders often echoed along the streets and among the board houses. But, if the boys were rough, and would fight sometimes, they now and then, by way of rarity, got up some rich scenes. Here is one of them:—

One morning, in the summer of 185—, it was whispered that Tim and Tucker, two old friends, both men of well-tried, and, hereabouts, undoubted courage, had fallen out the night before, and were then prepared to fight a duel, at ten o'clock, on the hill just east of town: distance, ten paces; weapons, shot-guns, loaded with six-shooter

balls. Now, for the benefit of weak nerves, we will say here, in the outset, that the thing was made up—a sham—understood by but very few, and of those few were not selected the friends who were to act as seconds. With these worthies it was to be a fight only too real—a fight to the death—and they made their preparation accordingly. As the hour approached for the duel, not less than five hundred honest miners gathered on the hill selected as the bloody field. The seconds, with their principals, appeared; the ground was measured off, the men took their positions, the word was given, and both men fired simultaneously. The five hundred pale faces turned, if possible, still more ashy. Tim was unharmed. Tucker stood for an instant, then struck his hand heavily on his breast, in the locality of which he had secreted a bladder, filled with a blood-colored fluid, burst the bladder, and what the five hundred pale faces could have taken their book oath was his life's crimson, gushed in copious quantities from his breast, and over his neck and face. The death-stricken man fell heavily to the ground. He was carried into a house near by, gasped heavily a few times, and, to outsiders, died. The spectators were horrified. Tim had disappeared. Some one, not an outsider, cried: "Let's hang Tim's second." That individual was just leaving the field, but not so far away but that he overheard the remark and the angry assent of the now thoroughly excited crowd. He broke, rushed breathless into town; ran to a friend who kept a livery-stable. Friend hid him away in the hay. The search began to grow close and warm. Friend, who had in the last few moments been let into the secret, advised him to escape, as he could not longer conceal his hiding-place. But how?—and where? The town was full of angry and terribly excited men, determined upon his death. A plan of escape was matured. A woman's dress was procured, also an old-fashioned Leghorn bonnet, of the hugest dimensions. Into these the trembling second was told to get himself in the shortest possible time, and without paying too much attention to the details of his toilet. A horse and side-saddle stood ready; the radiating fringes of the Leghorn were pressed so near together, and

held so by a handkerchief, that the lady's focus of vision on the world outside of the bonnet was limited to about two inches, and that directly over the point of his nose. With much ado he was seated in the saddle, ladywise, but almost instantly unseated and flat on his back in the street, owing to the insertion of an old boot under the horse's tail, by the stable-keeper, which caused the animal to make a sudden, and, to the rider, unexpected jump of eight or ten feet. Not much hurt, he was again mounted, and, in company with a friend on another horse, that could go, he set out on the keen run, just as an officer on horseback appeared around the corner. Tam O'Shanter's moonlight ride was nothing to that race. It was terrific. The wild yell of the crowd of "There he goes!" the firing of their pistols, and clattering hoofs of his pursuer's horse, were motives amply sufficient to induce the second to urge his animal to the highest possible point of speed consistent with his maintaining his seat on the lady's saddle. On they went, the pursuer and the pursued, each intent on accomplishing a single object—the one to capture and the other to escape. For three miles this terrible race continued; then, as they neared the foot of a rugged mountain, and the officer was gradually gaining on them, the friend advised the fugitive to leave his horse and trust to the bush. This was no time for holding a council—promptness was the word. He sprang from his horse and struck out up the mountain-side, over rocks and through the densest kind of chaparral. The officer fired several shots in the direction of the retreating Leghorn, and cried, "Stop!" But it didn't stop. On the contrary, if such a thing could be possible, it accelerated its get-up the mountain proclivity. In short, he traveled fast, without regard to the preservation of his feminine apparel, small bits of which, as long as it lasted, fluttered from every bush. He was last seen half a mile up the mountain-side, still going it, minus dress, coat, pants, or any thing else, except the crown of the Leghorn. The officer and friend rode back to town; the ruse was explained, and everybody, including Tucker, took a drink. But the poor second was kept in the mountains six weeks; and

THE GREAT SHOSHONE FALLS OF SNAKE RIVER, IDAHO.

when at last he did return, he looked as though he had lived on pine bark for a twelvemonth.—*S. F. Weekly Mercury.*

THE GREAT SHOSHONE FALLS OF IDAHO.

SNAKE RIVER is the south fork of the Columbia, having the alternate name of Lewis River, named after Lewis, one of the early pioneers who came west by way of the Rocky Mountains, following the course of the river to the point at which it empties into the Columbia. Snake River rises in the Rocky Mountains, near Fremont's Peak, on the Dakota line, flowing 800 miles through southern Idaho in a general westerly course, thence north 150 miles, forming the boundary line between Idaho and Oregon, receiving as tributaries the Boise, Owyhee, Salmon, and Clearwater rivers, besides numerous smaller streams, finally uniting with the north fork of Clark's River to form the great Columbia.

The valley of the Snake lies along an almost direct line from the South Pass of the Rocky Mountains, and in early days it furnished the most practicable route overland to the Pacific. In its descent over the elevated plains of Idaho, about 400 miles from whence it takes its rise in the Rocky Mountains, Snake River forms the great Shoshone Falls. The river here runs through a narrow, rocky gorge, which widens and terminates abruptly in precipitous cliffs, the summits of which are about 1,000 feet above the level of the rapids, and so steep that the traveler can descend at only one point—an old Indian trail, its numerous windings making it about a mile in length. Following this trail slowly and carefully, the tourist will in due time find himself standing upon the banks of the river, on a level with the rapids and overlooking the falls. The width of the river at this point has been variously estimated—we thought it at least 200 yards. The rapids here form a series of cas-

cades, ranging from 30 to 60 feet each in height, and just below them, the river, in one unbroken mass, leaps 210 feet into the bottomless pit below. The course of the river at this point is almost due east and west; the contour of the falls is that of an irregular horse-shoe, and their width, following the course of the water, is at least 400 yards. Although the river is not quite as wide at this point as the Niagara River, the falls are higher and quite as beautiful. The most complete view of the falls, including the river above and below the rapids, cliffs, and surrounding scenery, is obtained from Lookout Point. Lookout Point is a narrow cape of rocks projecting from the main bluff, about 300 yards lower down on the river than the falls, so narrow that two persons can not walk abreast. Care and caution should be exercised in going to the extremity of this point —the very timid or over-bold should never attempt it—a slip of the foot would in a moment precipitate one 300 feet into the raging torrent below.

Standing upon this point, we will endeavor to name the prominent places of interest. The first object which attracts our attention is Eagle Rock, a perpendicular pillar of rock about 100 feet in height, rising from the midst of the rapids, 50 yards from the south bank of the river, and almost overhanging the main cataract. Upon the topmost peak of this rock an American eagle has built his eyrie, a fitting home for our noble national bird—long may he live to occupy his unique and romantic abode! Just above, and about the center of the cataract, is Ballard Island, a small rocky island, covered with cedar and juniper trees. Several smaller islands, to the right and left of the large one, or Ballard Island, add to the beauty and picturesqueness of the scene.

The Two Sentinels—two huge rocky pillars—are, one on the north, the other on the south side, overlooking the falls, and reminding one of grim sentinels guarding their post. Lower down the river, and from a higher standpoint, one can obtain a fine panoramic view of the whole—the falls, the foaming rapids, Eagle Rock, the Two Sentinels, the picturesque islands, the huge pillars of perpetual spray rising

from the bottom and near the center of the cataract, but extending as it rises to either side, and made beautiful by the many-colored rainbows which shed a halo of glory upon the whole scene. Still lower down the river is Prospect Gulch. Several gentlemen of the party, actuated by the spirit of adventure, determined to attempt, through this gulch, to reach the river below the falls. They lowered themselves fifty feet on a rope down the perpendicular sides of a rocky cliff. Reaching firm ground, they managed with but little difficulty to scramble down, about 500 feet, to the banks of the river. Arriving there, they found that their troubles had just begun; they were 600 yards from the falls, to reach which their path lay around and sometimes over huge bowlders of slippery rocks, winding along the foot of the steep banks, and then through the foaming and boiling waters, the heavy swells of which reminded them *strikingly* of the breakers on the sea-shore. Finally they reached a point about 30 feet from the falls. Their journey here came to an abrupt termination by the shelving of the rocks into deep water. The wind struck this point with such violence that they feared to trust themselves in an erect posture. On their knees, they held with their hands to the overhanging brush, to prevent being blown into the river.

We think that one can not fully comprehend the immensity of the sheet of water and the sublimity of the scene until he can gaze upward as we did. This point is the Cave of the Winds. The Shoshone Falls, as a whole, will compare favorably with Niagara. Those of our party who have seen both places, pronounce the former superior in many respects. In beauty and wildness of scenery, the Shoshone can not be surpassed. Niagara excels in magnitude only.—*Oregon Statesman*, August, 1868.

A HISTORICAL BEAUTY.

IANA of Poictiers was born March 31, 1500. She married, in 1521, Louis de Breze, Grand Marshal of Normandy, and by him had two daughters. She must have been thirty-five years of age when the Duke of Orleans, afterward Henry the Second of France, at the age of seventeen, became deeply attached to her, and she attained her ascendancy over him, in 1559, at the age of fifty-six, retaining her beauty to the last. Miss Pardee thus describes her:—

"Her features were regular and classical, her complexion faultless, her hair of a rich purple black, which took a golden tint in the sunshine, while her teeth, her ankles, her hands and arms, and her bust, were each in turn the theme of the court poets. That the extraordinary and almost fabulous duration of her beauty was in a great measure due to the precautions which she adopted, there can be little doubt, for she spared no effort to rescue it. She was jealously careful of her health, and in the most severe weather bathed in cold water. She suffered no cosmetic to approach her, denouncing every compound of the kind as worthy only of those to whom nature had been so niggardly as to compel them to complete her imperfect work. She rose every morning at six o'clock, and no sooner left her chamber than she sprang into her saddle; and after having galloped a league or two, returned to bed, where she remained until midday, engaged in reading. The system appears a singular one, but in her case it proved successful, as, after having enslaved the Duke d'Orleans in her thirty-fifth year, she still reigned in absolute sovereignty over the heart of the King of France when she had nearly reached the age of sixty. It was certain, however, that the magnificent Diana owed no small portion of this extraordinary and unprecedented constancy to the charms of her mind and the brilliancy of her intellect."

"Six months before her death, I saw her so handsome," says Brantome, "that no heart of adamant could have been

insensible to her charms, though she had some time before broken one of her limbs upon the paved stones of Orleans. She had been riding on horseback, and kept her seat as dexterously and well as she had ever done. One would have thought that the pain of such an accident would have made some alteration in her lovely face; but this was not the case—she was as beautiful, graceful, and handsome in every respect as she ever had been."

She was the only mistress whose medal was struck. This was done by the city of Lyons, where the duchess was much beloved. On one side was her effigy, with this inscription: "Diana Dux Valentinorum Clarissima;" and on the reverse, "Omniam Victorum Vica" ("I have conquered the conqueror of all"), alluding to Henry the Second.

THE SOLDIER'S FAREWELL.

FOR so many years "the glory of France" has been such a purely military glory—the greatest of modern Frenchmen was so entirely a great soldier, that in any French song-book the most melodious and touching songs are generally of the camp. The "*t'en souviens-tu?*" of the two French veterans of the Guard, sung to the German melody of "Denkst du daran?" is familiar to all lovers of that kind of song. And here a friend sends a pleasant and skillful rendering of *Le dernier adieu du soldat*, a military ballad, which is introduced in Charles Lever's "Jack Hinton." The mingling of jest and pathos is entirely characteristic.

The original begins:—

"Rose! l'intention d'la présente,
Est de t'informer d'ma santé,
L'armée Française est triomphante
Et moi, j'ai l'bras gauche emposté."

THE SOLDIER'S FAREWELL.

Dear Rose, to you I send this present writing
To let you know how goes the world with me;
Our gallant boys have done some glorious fighting,
A left arm lost, alas! has done for me.
We've great successes on our track advancing,
The cruel grape has taken my poor bones;
We've sacked whole cities, but a spent ball glancing
Pays me my share of booty in my groans.

From an old hospital this word I'm sending,
To leave it soon at Death's call for the grave;
I send ten francs from him who does my mending,
For them I've sold the body he can't save!
I send the pieces, for I'm just now thinking
That if to-night must see me in the earth,
I can't do less for one whom love's been linking
So close to me than give her *all I'm worth.*

My poor old mother, when I left her crying,
Was nearly gone and looking close on death,
I've writ a line to tell her I am dying,
But I do hope she's taken her last breath.
For if the dear old woman still is living,
Her heart's so soft that if she hears I'm gone
She can not stay, and I shall death be giving
To her who gave me life, now left alone.

My little Rose, there's one old friend I cherish
You won't desert—my good old dog, I mean;
He mustn't know I'm dead—for sure he'd perish
If he but thought of me the last he'd seen.
He's looking now to see me home returning,
At least a corporal, if not something more;
Then guard him well, and keep the dog from learning
I died, a private, on this earthen floor.

It cuts me to the heart to think of dying
Far from the village and from you, my Rose;
No chance to say good-night to friends, or, sighing,
To press your hand before my eyelids close.

At home they'd soon my shattered bones be laying
Hard by the church—a cross above my head,
And there my Rose would sometimes come, and, praying
Ask God to keep him whom she loved though dead.

Then good-bye, Rose, good-bye, and don't be weeping;
Farewell! farewell! I'll see you, dear, no more;
For in the company I'll soon be keeping
They give no furloughs, though you beg them sore.
All's turning round—I feel I'm just departing,
I've got my orders and must leave you here;
Good-night, good-night!—One last word before starting;
God bless you, Rose, and don't forget me, dear!

Illustrated London News.

A TOAD UNDRESSING.

AUDUBON relates that he once saw a toad undress himself. He commenced by pressing his elbows hard against his side and rubbing downward. After a few smart rubs, his hide began to burst open along the back. He kept on rubbing until he worked all his skin into folds on his sides and hips; then, grasping one hind leg with his hands, he hauled off one leg of his pants the same as anybody would; then stripped off the other hind leg in the same way. He then took his cast-off skin forward between his fore legs into his mouth, and swallowed it; then, by raising and lowering his head, swallowing as his head came down, he stripped off his skin underneath, until it came to his fore legs; then, grasping one of these with the opposite hand, by a single motion of the head, and while swallowing, he drew it from the neck and swallowed the whole.

THE PIONEER SOCIETY ON THE DEATH OF ADMIRAL SLOAT.

HE Society of California Pioneers adopted the following report, February 5, 1868, on the death of Admiral Sloat, senior honorary member of the Association :—

Rear-Admiral John Drake Sloat was born in New York in the year 1780. He entered the United States Navy, February 12, 1800, and after aiding to build up that arm of the service, was honorably "mustered out," as Sailing-Master upon the reduction of the navy. At the beginning of the last war with Great Britain, he again entered the navy, and was appointed Sailing-Master, February 12, 1812. He was promoted Lieutenant, July 24, 1812, and saw active service both afloat and ashore. In 1820, he went to the Brazilian station in the line-of-battle ship *Franklin*, under (now Rear-Admiral Chas. Stewart) the hero of the frigate *Constitution* ("Old Ironsides)," and returned to the United States in the *Congress* in 1812. In 1824 and 1825 Lieutenant Sloat commanded the United States schooner *Grampus*, one of Commodore David Porter's squadron, on duty in the West Indies, in search of the pirates infesting the Gulf of Mexico, who were committing rapine and murder in that region ; he was in several sharp fights during this service. Lieutenant Sloat was promoted Master-Commandant, March 21, 1826, and appointed to the sloop-of-war *St. Louis*, of the Pacific Squadron, where he served two years. Commander Sloat, for several years after his return home, was Commandant of the United States Naval Recruiting station in New York City, was promoted Post-Captain February 9, 1837, and placed on waiting orders. In 1841, he was ordered to the command of the Navy Yard at Portsmouth, New Hampshire, where he remained three years. In 1845, at a time when the whole country was in a state of excitement upon two important political and diplomatic questions, and rumors of war, with Great Britain for the northwest boundary, with the cry of

"54° 40′ or fight," ran through the land, and with Mexico on the southern boundary to maintain the right of the United States to the recently admitted State of Texas, Captain Sloat was appointed to the command of the Pacific Squadron, and hoisted the flag of Commodore on board the frigate *Savannah* at Callao, Peru, succeeding Commodore Alexander J. Dallas, who had died at that place. From the time of his arrival in the Pacific, Commodore Sloat was closely watched by the English squadron under Admiral Sir George Seymour, was followed from port to port by its ships, and more often by the ship-of-the-line, *Collingwood* (eighty guns), bearing the flag of the Admiral. War with Mexico appeared inevitable; the land forces of the United States and Mexico were in position on each side of the Rio Grande, and the English question had increased in interest and excitement. Mexican territory on the northwest coast of the Pacific had long been coveted by England and France, to prevent any further acquisition west by the United States, and it seemed as if the time had almost arrived when all these subjects were to be definitely settled. Under these circumstances the United States Squadron made Mazatlan its point of rendezvous in November, 1845, where it was soon followed by several English ships, whilst the *Collingwood* lay at San Blas. The news of the battles of Palo Alto and Resaca de la Palma having reached Commodore Sloat early in June, 1846, through the Mexican official reports published in the newspapers in the City of Mexico, he sailed immediately, as if for the Sandwich Islands, but really for Monterey, California, where he arrived July 3, 1846, took possession of Monterey, hoisted the American flag July 7, 1846, and proclaimed the Californias to be territory of the United States. The *Collingwood*, Admiral Sir George Seymour, arrived at Monterey July 16, to find the Americans in possession of the country England so much desired. The health of Commodore (by courtesy) Sloat failing very much, he decided to return home, and sailed for Panama in the sloop-of-war *Levant* July 23, 1846. The Naval Retiring Board of 1856, placed Captain Sloat upon the Reserved List, and when the grade

of Commodore was created he was promoted to that rank, July 16, 1862, and appointed Rear-Admiral, July 26, 1866, on the Retired List. During the latter years of his life, Rear-Admiral Sloat was in command of the Navy Yard at Norfolk, Virginia, was employed on special service in superintending the construction of Stevens' Battery, at Hoboken, New Jersey, and last, was Superintendent of the United States mail ships sailing out of the port of New York.

Rear-Admiral Sloat, after the long service to his country of sixty-seven years, died at his residence on Staten Island, New York, November 28, 1867, at the age of eighty-seven, highly respected and honored by his family, his brother officers, and a very large circle of friends.

THE WONDERS OF THE CORAL REEFS.

THE submarine scenery of the "lagoons" of those tropical islands that are surrounded by coral reefs, is something wonderfully beautiful. In some cases, these reefs encircle the island so completely as to leave scarcely a single passage or gateway by which it can be approached. Ordinarily there is a space of a mile or a mile and a half between the reef and the beach of the island. From the inner edge of the reef, to the white broad beach, spreads the clear expanse of the lagoon, smooth and unruffled as the surface of an inland lake.

Below, through the calm translucent waters are seen numbers of different kinds of shell-fish, attached to the coral branches or wedged into their interstices. Others that are feeding reflect the brightest colors with every motion. Purple mullet, variegated rock-fish and small ray-fish, are dashing hither and thither near the bottom. Another species of mullet, of a splendid changeable blue and green, seem to be feeding upon the little polyps protruding from the coral tops. Shells, sea-plants, corals and fishes, and the slightest movement of the last, even to the vibration of

a tiny fin, or the gentle opening of the gills in respiration, can be seen with perfect distinctness in this transparent medium.

But what chiefly attracts attention, is the gay tints and curious shapes of the innumerable zoophytes, or "flower animals," springing up from the sides and bottom of the basin, and unfolding their living leaves above the limestone trunks or stems that encase them. Blue, red, pink, orange, purple, and green, are among their colors; and the variety of patterns seems absolutely endless. They mimic, in their manner of growth, the foliage of trees, the spreading antlers of the stag, globes, columns, stars, feathery plumes, trailing vines, and all the wildest and most graceful forms of terrestrial vegetation. Nothing is wanting to complete this submarine shrubbery, even to the minutest details. There are mosses and ferns and lichens, and spreading shrubs and branching trees, and bunches of slender, thread-like stems, swaying gently with the motion of the water. And it requires no effort of the imagination to see fancifully-shaped wild flowers in the numerous varieties of *actiniæ* or sea-anemones, many of which bear the closest resemblance to wood-pinks, asters and carnations. The imitations of these flowers are in some cases wonderfully perfect, even to their delicate petals, which are represented by the slender fringe-like tentacles of the polyp, protruding from its cell. Besides these counterparts of land vegetation, there are waving sea-fans, solid masses of sponge coral, clubs of Hercules, madrepores, resembling elegantly formed vases filled with flowers, dome-like groups of astræ, studded with green and purple spangles, with thousands of other shapes so strange and fantastic that they can be likened to no other objects in nature. — CHRISTOPHER ROMAUNT'S (J. F. BOWMAN'S), "*Island Home.*"

HOW TO GET RICH.

T the opening of the Northern District Fair, held at Marysville, September, 1865, General Bidwell, in the course of his opening address, thus plainly exposed the cause of the "hard times" in California:—

In regard to the dullness and stagnation in business which from time to time pervade the land, there are many causes and many remedies. We should ask ourselves: Do we not continue to practice the habits we assumed in former and flusher times, and thereby live beyond the legitimate bounds of our present available resources? It is true, too, that the scarcity of money and the high rates of interest which capital commands, precludes the possibility of engaging in many enterprises for the development of the mines and the improvement of the material resources of the State; but we can and ought to produce more than we do even with our present means and the present high prices of labor and capital. I will not assert that we can at once remedy *all* the trouble that seems to beset our path; but I do say it is in our power to remedy much of it. But so long as we continue to import things that can be produced here, just so long must we send away our gold to pay for them. We can and ought to produce all, or nearly all, of the thousands of barrels, boxes, and cases of dried apples, raisins, and other fruits, which we import, amounting, annually, to half a million of dollars. We could produce nearly all of the brandies, malt, and other liquors, if we must have them, which we now import, and thereby save, annually, a quarter of a million of dollars more. We have the means and should produce all of the butter, cheese, bacon, hams, pork, lard, lard oil, linseed, and in time even olive oil, which we import, and thereby make a saving of at least half a million dollars more every year. We have in this State exhaustless mines of nearly pure iron; and we can and ought to produce all of that material used

for railroads, machinery, and other purposes, and thereby save annually millions of dollars more. These, and thousands of other things which we ought, and will, eventually, be compelled to produce here, or do without, we have to pay for in gold; and at prices which charge the consumer with transportation, insurance, and profit on the articles; and then again with the transportation, insurance, and profit on the gold sent to pay for them, and this, of course, in addition to the original cost; all of which can be saved by producing them here. If we can not do all of this at once, we should do as much as we can, and aim to make the residue at the earliest practical period. Is it true in this land of luxurant vegetation where, literally, the "cattle upon a thousand hills" graze and thrive in winter as well as summer with little or no attention, that we must continue to transport butter and cheese from New York? There is no such necessity, and I speak from experience. But a few years ago nearly all the farmers of this valley, and I among the rest, purchased nearly all the butter they used—butter that had been imported across the Isthmus of Panama, or around Cape Horn. Some of it seemed old enough to have made a voyage around the world. I became ashamed of it, and resolved that if I could not, with thousands of cattle which I had at the time, make sufficient butter to supply my own family—and my family is large, over fifty, sometimes a hundred in number—I would do without it. And with many other things I have made similar resolves; and I am happy to be able to say they have resulted in success. If the whole State—aroused to the importance of decreasing importations which deplete our purses and absorb the means that would give us prosperity and independence, would make a firm resolve to manufacture more of many things or do without them, the result would be an impetus to all branches of industry that would revolutionize the condition of things and banish complaint from our shores.

DIRGE FOR THE BEAUTIFUL.

Softly, peacefully,
  Lay her to rest;
Place the turf lightly
  On her young breast;
Gently, solemnly,
  Bend o'er the bed
Where we have pillowed
  Thus early her head.

Plant a young willow
  Close by her grave;
Let its long branches
  Soothingly wave;
Twine a sweet rose-tree
  Over the tomb;
Sprinkle fresh buds there;—
  Beauty and bloom.

Let a bright fountain,
  Limpid and clear,
Murmur its music
  (Smile through a tear),
Scatter its diamonds
  Where the loved lies,—
Brilliant and starry,
  Like angels' eyes.

Then shall the bright birds
  On golden wing,
Lingering over
  Murmuring sing;
Then shall the soft breeze
  Pensively sigh,
Bearing rich fragrance
  And melody by.

Lay the sod lightly
  Over her breast;—
Calm be her slumbers,
  Peaceful her rest!

Beautiful, lovely,
She was but given,
A fair bud to earth,
To blossom in heaven.

JAPAN.—ITS RESOURCES AND COMMERCIAL IMPORTANCE.

SINCE the organization of the China and Japan steamship line, public attention has been more than ever directed to the extent, resources, and general condition of the latter country. The latest and best authorities set down the population of Japan at from 35,000,000 to 40,000,000; but this estimate, no doubt, includes the island of Lew Chew and other islands which have a very indefinable relation to Japan, and are treated by some writers as a separate country. The extent of territory is even more indefinitely known than the population. Many of the lesser islands are rarely if ever visited by Europeans. They are reached by intricate and hazardous channels, and, at least, have at present no great commercial importance. The great island of Niphon, with its inland seas and cities, and the two adjacent islands of Kiusiu and Sikok, attract the chief attention. The habitable territory is thought not to be much greater than the British Isles.

The government is, in fact, a confederacy, and the real power is in the hands of one hundred and ninety-six princes, called Daimios, who are for most purposes absolute sovereigns in their own territory. The spiritual Emperor (Mikado) has little to do with the government; and the Tycoon, possessing the nominal power of an emperor over the confederation, is only a Daimio of more exalted rank, having some relation usually to the Mikado by way of marriage.

By virtue of treaties with foreign powers, the ports of Nagasaki, Kanagawa, and Hakodadi were opened to foreign trade. As the advantage of commercial intercourse is better understood, the jealous and exclusive policy which

has governed Japan will, no doubt, be greatly modified, as has already been the case in China. The imports and exports of two of the cities above named, in 1862, were as follows:—

	Imports.	Exports.
Nagasaki,	£149,326	£217,314
Kanagawa,	536,860	1,313,568

In the year 1863, one hundred British ships cleared from Kanagawa. The exports in that year amounted to £2,638,503, and the imports were set down at £811,146—about four-fifths of this trade being then in the hands of English merchants. Among the exports were 19,609 piculs of silk and 6,000,000 pounds of tea. These exports hardly made any impression upon the surplus products in store, and which might have been sent abroad but for the timid and narrow policy which ruled for the time. Great difficulty has heretofore been experienced in dealing with Japanese currency, and trade has been done with less hindrances in the way of barter, than by any other method.

In 1863, the vessels entering the Japanese ports were: one hundred British, forty American, thirteen Dutch, eight German, seven French, two Russian, of 64,328 tons; and one hundred and sixty-eight vessels cleared, of 61,210 tons.

Agriculture is the leading pursuit of the industrial classes outside of the large cities. As rice forms the chief food, this, of course, is the leading agricultural product. Rotation of crops and irrigation is practiced to great perfection. The principal crops are, rice, wheat, barley, millet, cotton, beans, buckwheat, Indian corn, rape, pease, hemp, and tobacco. There are few domestic animals, the inhabitants never eating animal food. Oxen and cows are used for draught, and usually singly. No use is made of cows' milk, and sheep and pigs are not generally raised. Most of the vegetables known in this country, are also cultivated in Japan. Fruits are abundant, but are not brought to such perfection as in other countries. The apple, pear, plum, peach, grape, chestnut, persimmon, pomegranate, fig, orange, lemon, citron, strawberry, and many other kinds of small fruit, are common in that country. The flora

is also remarkable; many rare plants have been brought from Japan and propagated in this State.

The timber-trees of Japan are said to equal in value those of any other country of the same extent in the world. The conifers are most numerous, and these are cultivated with the utmost care. Nearly every known species of oak-tree is found, both live oak and deciduous; and the timber of several of these varieties, unlike that of California, is the very best both for ship-building and other purposes requiring great strength and solidity. Some of the best cabinet woods known to artisans abound. Specimens of these woods are often seen in articles imported from that country. The elms also grow to a great size, and this timber is of excellent quality. The camphor and mulberry tree are of great value. There is a usage prevailing worthy of a speedy introduction here. Whoever cuts down a forest tree is required forthwith to plant another. This rule would have a most salutary effect upon the heedless, improvident men, who slash down our beautiful forests, destroying more timber than they ever take to market; and especially ought it to apply speedily to those who strip the bark from the rarest and most beautiful oaks of California, and leave the trunks of thousands of those trees every year to rot upon the ground.

Japan is also rich in minerals. Kæmpfer, a good authority, says: "The greatest riches of the Japanese soil, and those in which the Empire exceeds most known countries, consist in all sorts of minerals and metals, particularly in gold, silver, and copper." It is estimated that the Dutch, in the course of sixty-five years, sent out of that country gold to the value of nearly £50,000,000. Silver, quicksilver, lead, tin, iron, and sulphur are abundant. But the most important natural production in its relation to modern commerce, is coal. There is hardly a doubt but this article can be obtained in any desirable quantity. Bituminous coal is the only kind yet seen by foreigners, and much of this, taken from the surface, was not of the best quality. Some specimens from a greater depth were obtained during Commodore Perry's visit, which were of an excellent

quality. Enough is known to warrant the opinion that steamships touching at the principal ports opened to commerce, could always obtain a supply of native coal, and that ultimately there will be no more of restriction upon its export, than upon tea or silk.

The list of fibrous plants is very large. About seventy different sorts of paper are made in Japan, and some of these exceed in delicacy and toughness the manufactures of any other country. All papers are made by hand, and nearly all are made from the bark of trees and shrubs—the bark of the mulberry-tree is used to a great extent. No rags are used as paper stock; the barks and fibers furnishing much better material. Some years ago an attempt was made to export rags from Japan; but it was found that the coloring matter peculiar to that country could not easily be separated, and the business at that time was given up as unprofitable.

Little account has thus far been made of any passenger traffic furnished by Japan. A few years ago, China furnished no passengers. Now, it is estimated that at least five thousand Chinese will travel each way by the proposed line of steamers. Restrictions upon travel have already been in good part removed by the Japanese authorities. The time may not be far distant when this curious and inquisitive people, availing themselves of their newly-granted privileges, will travel extensively, and their patronage in this way may yet become of great importance to this port, and in its effects upon the great steamship line so soon to commence operations.—*S. F. Bulletin*, August 3, 1866.

GOLD DIGGING IN THE TIME OF QUEEN ELIZABETH.

THE discovery of gold, always an object of ambition, has not unfrequently been prosecuted with eagerness and avidity, and the wildest schemes have been proposed, the most extraordinary attempts made to obtain this coveted treasure. Alchemists, adventurers of all nations and creeds, navigators of renown, the educated and ignorant, the wealthy and needy, have in turn devised and assisted in the endeavor to discover gold, and nearly every part of the globe has been ransacked for the same object. Three centuries ago, companies were formed, large sums of money subscribed, vessels fitted out, and able commanders appointed to attempt a discovery—a great discovery; and though gold most certainly was not the original object, it is equally certain that it had a most important influence on the continuous and vigorous prosecution of the discovery, and that the hope of it largely contributed to swell the list of subscribers in two out of the three celebrated voyages undertaken by Martin Frobisher in search of a northwest passage. Previous attempts, it is true, had been made to discover this passage; but on the accession of "the Virgin Queen" a host of adventurers presented themselves. Arguments, letters and memorials followed in succession from persons anxious to attempt the discovery, and equally willing to encounter dangers in order to attain it. Sir Humphrey Gylberte's discourse to prove a passage by the northwest no doubt contributed to stimulate efforts in that direction, and was most probably, as Chalmers says, the cause of Frobisher's first voyage.

A year before its publication, in 1575, Frobisher was the bearer of a letter from the Queen to the Muscovy Company, in which they were exhorted to again attempt the discovery. Twenty years had elapsed since Sir Hugh Willoughby's unfortunate expedition, when most of his company perished with cold in Lapland. The Company's answer was not favorable, and the Queen was induced to write a second

letter. Soon afterward, Frobisher, with Michael Lok, and others who would be adventurers, obtained the required license from the Muscovy Company, and a voyage was resolved upon. It was, however, delayed a whole year for lack of money, and might perhaps have been abandoned altogether, but for Michael Lok. It was mainly through his exertions that the necessary expenses were collected. Lok himself subscribed upward of £700 out of the required sum of £1,600. Every thing being at length in readiness, Frobisher sailed on his first voyage from Gravesend on the 12th June, 1576, with his little fleet of three small vessels and thirty-four men.

It is not my purpose to speak of the geographical discoveries which were made by Frobisher in this or either of his celebrated voyages. They were, as it is well known, of very considerable importance, and thoroughly established his reputation as a great navigator and commander. After much suffering and great hardships, Frobisher returned in the following October, with the loss of one of his vessels and two-thirds of his little company. Thirty-four persons had sailed with him, thirteen only returned. "He also brought a strange man from Frobisher's Strait" with him, who was seized, and by main force pulled on board by Frobisher himself, while in the act of receiving a present of a bell.

Before sailing, Frobisher had made a promise to Lok that he would give him "the first thing he found in the new land." A piece of black stone, "as great as a half-penny loaf," was the accepted gift, and upon this black stone hangs our history of the (supposed) gold discovery. The stone was in Lok's possession, and as a proof of the value of it in his opinion, he lost no time in handing pieces of it to the assay-master of the Tower, and to other gold refiners. Several proofs were made, and "so much marvaile" at the results, that Lok took them to the Queen herself.

A second voyage, previously resolved upon, was confirmed, and commissioners immediately appointed to carry out all the details, the Privy Council having unhesitatingly reported in favor of it. The few who knew of the gold dis-

covery were exhorted to secresy, but without avail. The news soon spread, and doubtless gave some offense to the Queen, for Lok, in a long letter to Elizabeth, took considerable pains "to set down all his proceedings in this matter."

All were now eager to join in the adventure. The Queen doubled her subscription, making it £1,000. The Lord Treasurer, Lord Admiral, and other high dignitaries subscribed £100 each; Sir Thomas Gresham twice that amount; Sir Philip Sydney, £50. All the charges of this voyage were estimated at £4,500.

Frobisher sailed on his second voyage the 26th May, 1577, with three vessels, victualed for seven months, and one hundred and twenty men. Thirty of his company were either miners or refiners, and they were taken expressly to work at the mines whence the piece of ore was brought. If the mines failed, Frobisher was instructed to send one of his ships home, while the other two were to proceed to make the discovery of the northwest passage. If they proved successful, he was commanded not to discover the secret of their riches. After four months absence the ships arrived at Bristol, and Frobisher was immediately ordered by the Privy Council to unload them and discharge the ore. This was to be deposited in Bristol Castle, or some other safe place, under four locks, the keys of which were to be kept by Frobisher himself, the Mayor of Bristol, Sir Richard Berkeley, and Michael Lok. One object of this voyage, the obtaining a quantity of the supposed gold ore, was, no doubt, thought to have been successful. Lok was in a fever of excitement; he believed in the complete success of the gold discovery, and imagined his fortune already made. He urged the Council to determine on the speedy melting of the ore, and also that his office of Treasurer might be ratified.

A month elapsed. During this time the officers of the Mint had been directed by the Privy Council to receive the ore into the Tower. Lok had reported to Secretary Walsingham that though not yet brought to perfection because of the jealousy of the workmen, who were loath to show

their coining, it was very rich, and would yield £40 a ton, clear of all charges, adding, "this is assuredly true, which may suffice to embrace the enterprise." Notwithstanding this report, it is evident that the opinions of the "workmen" differed materially. One asserted that two tons would yield in fine gold twenty ounces; a second asserted that although he had proved it to the utmost, he found "no such great riches;" while a third declared that he could discover in the ore neither gold nor silver, or next to none. Some of these proofs of "Frobisher's ore," in the shape of small particles of gold fastened to paper by sealing-wax, are in her Majesty's Public Record Office, and in a perfect state of preservation.

If any unfavorable reports were spread of the value of the ore, they must have been quickly suppressed, or, at all events, have met with little credence. The Queen commanded Secretary Walsingham to write to the Lord Treasurer and the Lord Chamberlain that her Majesty, "understanding that the riches of the earth is like to fall out to a good reckoning, is well pleased that a third voyage be taken in hand." Before the truth could be really ascertained, another voyage was resolved upon, and the necessary expenses quickly subscribed for Frobisher's third voyage. The Queen, her officers of State, lords and commoners, were anxious to be adventurers "in the goods now come home, or else in the next adventure." An expedition, more costly than both the two preceding, was quickly put in preparation, and pressed forward with expedition. Lord Burghley, himself an adventurer, brought all the resources of his active mind into vigorous use to insure the success of the enterprise. All his memoranda are preserved. Ships were to be sent capable of bringing home five thousand tons weight of ore. He calculated that one miner could dig half a ton of ore a day, and then reckoned the number of tons that one hundred, two hundred, or three hundred miners could dig in a month. The wages of the miners, the freight of the ore, and the charges of keeping one hundred men in the country for eighteen months—in fact, every detail connected with this voyage was, to the Lord Treas-

urer, a matter of careful consideration. On Frobisher's arrival at Warwick Island, he was instructed to repair to the mines and minerals where he wrought the year before, and there to place the miners and other men to work and gather the ore. While in Warwick Sound, he was ordered to search in other places for other mines, and if any were found richer, to remove thence. Strict injunctions were given against allowing assays to be made of any metal, matter or ore, without authority, or keeping for private use any ore, under severe penalties. Eleven vessels were fitted out, at a cost of £13,000, and sailed from Harwich on the 31st May, 1578, the Queen herself watching their departure, and wishing them "God speed."

Ten weeks afterward, on the 10th of August, all the miners were set ashore at Bear's Sound. During seven days, Frobisher himself visited divers sounds in search of ore. Two of the vessels were laden at Bear's Sound, others at the Countess of Warwick Sound, at the "Countess of Sussex" mine, and at Corbett's Point. Edward Sellman, the Registrar of the fleet, in his journal of this voyage, gives a detailed account of the places where the ore was obtained, the difficulties of finding it, and of lading it. He says they could not light upon any of the rich ore found last year, that the mine in the Countess Island entirely failed, and that he thinks "much bad ore will be found."

A little house was built at the Countess of Warwick mine to stand until next year, and many mining implements were left in it. The vessels laden, they sailed home in "a terrible storm." Immediately on his arrival at Cornwall, on the 25th of September, 1578, Frobisher repaired to the court at Richmond, and from thence to London. "No small joy was conceived" for the safety of the men, though many died of sickness, but especially for the treasure brought home. The ships were laden with "rich gold ore," supposed to be worth £60 and £80 a ton; and more than double the quantity was brought home than was expected. Several assayers and gold refiners commenced their proofs, and workmen from Saxony and Germany were sent for; but

unhappily, the first trial "proved very evil." Further trials were made in presence of Sir Thomas Gresham and the other Commissioners, but they showed "far from the riches looked for." The ore grew into discredit; the adventurers began to fear their brilliant hopes might prove illusory, and withheld the money due for payment of the ships' freight. During the six months further proofs were made in the presence of Frobisher himself and other persons, with various results, but none were satisfactory or encouraging. Then complaints began to be heard, and Michael Lok lamented that "the works at Dartford lie still dead as yet, to the no small damage of the Company." Their stock amounted to upward of £20,000; of which the Queen alone subscribed £4,000, members of the Privy Council, £3,740; the Earl of Oxford, £2,520; and Lok alone £2,380; while Frobisher's subscription was but £270. Time passed on; nothing satisfactory had been done. In despair, Lok petitioned the Privy Council, beseeching their consideration. He had for three years taken charge of all the business of Frobisher's voyages, and ventured all the goods he had in the world; and he, his wife, and fifteen children, were left to beg their bread henceforth. "unless God turn the stones of Dartford into his bread again."

Two years elapsed, and even then the positive value of the ore had not been ascertained, though the Queen and all interested, must by that time have been convinced that any amount of gold from it could not be expected. No quantity appears to have been melted either at Dartford or at the Tower during all this time. The real truth, however, came out at last, and all doubts were finally set at rest by two assays made by William Williams, in July, 1583. The two minute particles of *silver* found in two hundred weight of "Frobisher's ore" were not nearly so big as a pin's head, and they remain to this day, fastened by sealing-wax to the paper, an evidence of the worthlessness of the ore. Thus fell to the ground all the golden dreams of the great value of the suppoesd discovery.

Michael was the son of Sir William Lok, an alderman of

London, and had traveled upward of thirty years "through almost all the countries of Christianity." He was an "old acquaintance" before Martin Frobisher sailed on his first voyage, but the ruin of one and the disappointment of both embittered their subsequent relationship and made them enemies. According to his own account, Lok had used Frobisher "as his fellow and friend," had opened all his private studies and twenty years' labor to Frobisher, had shown him all his books, maps, charts, and instruments. "I daily instructed him," says Lok; "making my house his home, my purse his purse at need, and my credit his credit to my power, when he was utterly destitute both of money, credit and friends." The last we hear of Michael Lok is unfortunate indeed. A prisoner in the Fleet, he petitions the Privy Council for consideration for "his present poor state." Nearly £3,000 was still owing by the adventurers to Frobisher's voyages, and for which Lok was unhappily bound. He earnestly prays for his release, for his accounts to be discharged, his bond for £4,000 for the 'Queen's adventure to be canceled, and a warrant for protection for debts owing by the company. Let us hope his petition was granted. There is evidence that Frobisher lodged at the house of one Brown, in Fleet Street, and then, "to be nearer Lok," at Widow Hancock,'s in Mark Lane. Soon after Frobisher sailed on his second voyage, the pitiful voice of his wife was heard, praying to be kept from starvation. Isabel Frobisher, "the most miserable poor woman in the world," as she styles herself, petitioned Secretary Walsingham for relief until her husband's return. She asserted that she was first the wife of Thomas Riggat, of Snaith, in Yorkshire, a very wealthy man, who had left her in very good state and with good portions to all her children; that she afterward "took to husband, Mr. Captain Frobisher (whom God forgive!) who had spent all, and put them to the wide world to shift," and that her children of her first husband were with her in a poor room at Hempstead, ready to starve. Unfortunately, we have no clew to the result of this appeal. Whether Frobisher had spent all his wife's and her children's portions in the further prosecution of his great discoveries

we can not tell. Though unsuccessful in "gold-digging," Frobisher had no reason to complain of the excitement in that direction. The hopes alone of a gold discovery proved of estimable benefit, no less to himself than to his country. They helped to rouse the enthusiasm of his admirers, and they encouraged the liberality of adventurers in his voyages for the avowed purpose of discovering the northwest passage.—*Once a Week.*

THE VULTURE.—AFTER THE LATE EDGAR A. POE.

[THE Vulture is the most cruel, deadly, and voracious of the birds of prey. He is remarkable for his keen scent, and for the tenacity with which he invariably clings to the victim on whom he has fixed his gripe. He is not to be shaken off, while the humblest pickings remain. He is usually found in an indifferent state of feather.—*New Translation of Cuvier.*]

Once upon a midnight chilling, as I held my feet unwilling
O'er a tub of scalding water, at a heat of ninety-four;
Nervously a toe in dipping, dripping, slipping, then outskipping,
Suddenly there came a ripping, whipping at my chamber door—
"'Tis the second floor," I muttered, "flitting at my chamber door—
Wants a light—and nothing more!"

Ah! distinctly I remember, it was in the chill November,
And each cuticle and member was with influenza sore;
Falteringly I stirred the gruel, steaming, creaming o'er the fuel,
And anon removed the jewel that each frosted nostril bore—
Wiped away the trembling jewel that each reddened nostril bore—
Nameless here forevermore!

And I recollect a certain draught that fanned the window curtain
Chilled me, filled me with a horror of two steps across the floor;
And, besides, I'd got my feet in, and a most refreshing heat in—
To myself I sat repeating, "If I answer to the door,
Rise to let the ruffian in who seems to want to burst the door,
I'll be ——," that and something more!

Presently the row grew stronger; hesitating then no longer,
"Really, Mr. Johnson, blow it!—your forgiveness I implore,
Such an observation letting slip, but when a man's just getting
Into bed, you come upsetting nerves and posts of chamber door,
Making such a row, forgetting"—Spoke a voice beyond the door,
"'Tisn't Johnson"—nothing more!

Quick a perspiration clammy bathed me, and I muttered "Damme,"
(Observation wrested from me, like the one I made before)—
Back upon the cushions sinking, hopelessly my eyes, like winking,
On some stout for private drinking, ranged in rows upon the floor
Fixed—and on an oyster barrel (full) beside them on the floor,
Looked and groaned, and nothing more.

Open then was flung the portal, and in stepped a hated mortal,
By the moderns called a VULTURE (known as *sponge* in days of yore).
Well I knew his reputation! cause of all my agitation—
Scarce a nod or salutation changed, he pounced upon the floor,
Coolly lifted up the oysters and some stout from off the floor,
Helped himself—then took some more!

Then this hungry beast, untiring, fixed his gaze with fond admiring,
On a piece of cold boiled beef I meant to last a week or more.
Quick he set to work devouring—plates in quick succession devouring—
Stout with every mouthful showering made me ask, to see it pour,
If he quite enjoyed his supper, as I watched the liquid pour:
Said the Vulture, "Nevermore!"

Much disgusted at the spacious vacuum by this brute voracious
Excavated in the beef (he'd eaten quite enough for four)—
Still I felt relief surprising, when at length I saw him rising;
That he meant to go, surmising, said I, glancing at the door,
"Going?—well, I won't detain you—mind the stairs and shut the door"—
"Leave you, Tompkins!—nevermore."

Startled by an answer dropping hints that he intended stopping
All his life—I knew him equal to it, if he liked, or more—
Half in dismal earnest, half in joke, with an attempt at laughing,
I remarked that he was chaffing, and demanded of the bore,
Asked what this disgusting, nasty, greedy, vile, intrusive bore
Meant by croaking "Nevermore."

But the Vulture not replying, took my bunch of keys, and trying
Several, found at length the one to fit my private cupboard door;
Took the gin out, filled the kettle, and with a *sang froid* to nettle
Any saint, began to settle calmly down the grate before,
Really as if he meant departing at the date I named before,
Of never, nevermore!

Then I sat engaged in guessing what this circumstance distressing
Would be likely to result in, for I knew that long before—
Once (it served me right for drinking) I had told him that if sinking
In the world, my fortune linking to his own, he'd find my door
Always open to receive him, and it struck me now that door
He would pass, perhaps, nevermore!

Suddenly the air was clouded, all the furniture enshrouded
With the smoke of vile tobacco—this was worse than all before—
"Smith," I cried (in not offensive tones, it might have been expensive,
For he knew the art defensive, and could costermongers floor;)
"Recollect it's after midnight—are you going?—mind the floor!"
Quoth the Vulture, "Nevermore!"

"Smith!" (the gin was going down his throat, in rivers flowing,)
"If you want a bed, you know there's quite a nice hotel next door,
Very cheap—I'm ill—and joking set apart, your horrid smoking
Irritates my cough to choking. Having mentioned it before,
Really, you should not compel one—will you mizzle as before?"
Quoth the Vulture, "Nevermore!"

"Smith!" I shrieked—the accent humbler dropping, as another tumbler
I beheld him mix—"be off! you drive me mad—it's striking four;
Leave the house and some thing in it—if you go on at the gin, it
Won't hold out another minute. Leave the house and shut the door—
Take your beak from out my gin, and take your body through the door!"
Quoth the Vulture, "Nevermore!"

And the Vulture, never flitting, still is sitting, still is sitting,
Gulping down my stout by gallons, and my oysters by the score;
And the beast with no more breeding than a heathen savage, feeding
The new carpet's tints unheeding, throws his shells upon the floor,
And his smoke from out my curtains, and his stains from out my floor,
Shall be sifted nevermore.

THE REQUIEM OF THE YEAR.

ANOTHER wrinkle has been written on the brow of Time. Another year is dead. Scarce have the echoes ceased of those exulting strains which ushered in his advent, when the air grows heavy with the sounds of lamentation. In his infancy of Spring he sported joyously amid the gush of song-birds and the blandishment of flowers. In the golden Summer of his youth he dallied with delusive dreams. But the Autumn of manhood stole upon him with its stern vicissitudes, and long and painfully he buffeted the billows, until at last the Winter of old age, with many sorrows piercing his great heart, bade it cease to throb forever. Prone on the frozen breast of earth he lies, in rigid state, wrapped in his winding-sheet of snows, while the low measured moan of ocean and the wild wailing of the northern blast blend with the voices of the night to chant his requiem. Clinched in his pulseless grasp he bears away (what none can summon back) a severed cycle of the life, the mind, the deeds, the destinies of all the living. Forth from their cerements start the specters of the by-gone years to greet him at his coming. Within that dread domain where he has gone they stand like sentinels to guard its secrets till the day of doom. Not wisely said the moralist: "The Past is but a point." For what seems thus to the gross sense of man is a vast land of stillness and of shadows. Unfathomable wonders lie concealed behind its dusky veil, waiting forevermore the grand event of nature's dissolution. No mortal eye can penetrate

its mysteries, nor mortal tongue evoke the spirits from its vasty deep. With Titan grasp thought ventures to essay it, but in vain; with vacillating splendor fancy gilds its vestibule, yet pierces not beyond. There the wrecks of empire float sullenly along the stream of Time. There the crumbling remnants of all that human hand hath wrought or human intellect hath planned lie moldering in dim and drear magnificence. There the designs and undertakings, the struggles and achievements of unnumbered generations are scattered far and wide in broken fragments. There the tongue of Demosthenes is hushed in silence, and the sword of Hannibal consumes in rust. There the mean and the mighty, the oppressed and the oppressor, sleep together. There congregate those giant souls beneath whose tread the globe still rings, whose exodus from earth convulsed the nations with a grand funereal wail, and the myriad multitudes who died and left no sign. There dwell the countless millions of the buried dead, from those who trod this orb when first it sprang all green and glorious from its Maker's hand, and those who filled the intervening vastness of the ages, even unto those who yester-eve, with dying eyes, gazed on the setting sun. There Ruin bends mournfully above the faded grandeur of Assyria, the pomp of Pericles, the scepter of Seleucus, and the broken bow of Mithridates. There the shade of Cæsar grimly stalks along, and the Corsican stands evermore aloof, in the tremendous solitude of his incommunicable soul. No music floats from David's tuneless lyre, no song escapes from the sealed lips of Miriam, no timbrels ring athwart the somber sea of Egypt. All is the hush of dense, impenetrable silence. Yet not alone to earth and man are limited the mysteries of that abstruse abyss. Through the long sweep of ages and the vast reach of space, uncounted systems have sprung forth and flourished and decayed. With all their teeming life and high intelligences—some loftier, some lower, than the race of man—they have departed. Comets have flamed through their appointed path, and meteors have blazed, then sunk in the immeasurable void, extinct and rayless. Where are they now? Go ask the former years! And he, whose dirge

throbs on the muffled midnight air, has gone to meet them. Beyond the gleaming stars; beyond the myriad worlds which sparkle on the night; beyond remote Arcturus, and the chorus of the Pleiades, and the reaches of Orion's beam; beyond the utmost margin of created things, stretched the wide empire of that dead old year. It spanned a universe, and spread far out into the fluctuating mass where chaos rules, where leaden darkness dwells, where Deity hath not yet shaped confusion into order. In its huge circuit, earth, with all that it containeth or controls, was but an atom.

That mighty potentate has passed away. Grimly he hoards the records of his grand experience and the deeds which chronicled his era in the silence of the Past. Yet, as the sun-struck Memnon gave a sound, from that mysterious and awful realm comes forth a voice of admonition unto all the sons of Adam. Into the secret chambers of the soul, in the still hours of meditation, steal its murmurs, more impressive than the oracles of Delphi, whispering how vain are all the uses of this world.

Alas, that man, with so sublime a destiny, and aspirations so exalted, should ever grope in darkness and mirage. Chained to the clods of earth, as once Prometheus to the rock, he strives not, like the dauntless Titan, to wrest fire from heaven. Not vainer for a god was Persia's sacred flame or Egypt's crocodile, than are the idols which he impotently worships. What is pleasure but a phantom, what ambition but a dream?—what is wealth but rust, fame but a bubble? The phantom flits, the dream dissolves, the rust frets silently away, the bubble bursts; and, standing on the very verge of Time, the parting soul deplores how hollow and unsatisfying are the things it craved.

Even at the best, the record of man's life is a sad narrative of blight and change; of wasted energies and faded hopes; of longings still ungratified, yet never ceasing; of objects unattained, yet unrelinquished; of disappointment and decay;—while over the prevailing desolation passion flings a fiercer scath, as lightning blasts the summit of a ruin. Far in the olden time, that venerable sage whose life was checkered by extreme vicissitudes—whose resistless spirit,

heaving like the ocean, scaled the loftiest heights of human lore, then fluctuated to the depths of sin, but rose triumphant at the last;—in one brief monologue pronounced the epitaph of human nature:—"I entered this world in impurity, I have lived in perturbation, I depart in anxiety. Cause of Causes, pity me!" And yet the dying Aristotle dimly saw, and the butterfly of Pythagoras obscurely symboled what, to the later and more ripe experience of a maturer age, down the long vista of descending years, has been revealed—that life is but the period and earth the scene of man's development into that grand proportion, faultless symmetry, and beauty superhuman, which shall glorify the soul in its bright sphere beyond the stars. And the death of all the years is but the birth of life immortal! It is allotted unto all to gather from the past, instruction; from the present, opportunity; and from the future (as anciently from the Hesperides' enchanted garden), the golden fruits of everlasting peace. The gravestones of the earth are the sententious guardians of half its wisdom. Sculptured on their marble page is a curt summary of the desires, the projects, the results of human life. "Look not mournfully into the Past," saith one of these quaint monitors; "it comes not back again. Wisely improve the Present; it is thine. Go forth to meet the shadowy Future without fear and with a manly heart." Many there be who pass not idly through the world as a child wantons among flowers, but diligently gather from the tree of life its chosen fruits. These wrest improvement from the waning years; these hopefully climb the drear mountains, nor shudder when they come to the dark river; these make the vanities of earth the stepping-stones to heaven.

The year is dead! In his diversified experience were blended all the alternations and vicissitudes of human life. He twined fresh laurels round the victor's brow, and planted cypress on the new-made grave. He heard the first cry of infancy, the lover's secret, and the altar's vow. He beheld the demons of intemperance, and lust, and murder holding their high carnival among the nations. He gazed on fairer scenes—where charity dispensed its dole, and pity sympa-

thized with grief, and good deeds flourished in a naughty world. He saw Hope grasp its anchor, and Faith cling unto its cross. It was his destiny to draw forth from the urn of Fate the varied lots of men, and, as he scattered blessings or bereavement, his course was luminous with joy or lurid with despair.

Another year succeedeth, and another, in a long unbroken train. "They fall successive, and successive rise." Year after year fulfills his destined mission; and, departing, hands unto his follower the torch of life."

And ever more, from age to age, it shall move on its flaming path, until it passes to the youngest born of Time. And the last year and the last man shall die together. In that dread hour of nature's dissolution, Chronos, the scythe-bearer, the father of the years, who saw the earth created, and shall see it crumble—each hair upon whose frosty head it took a century to bleach—will perish, too. Amid the awful grandeur of that resurrection, the apocalyptic angel shall call forth from earth and sea the dead of every land and every generation, in multitudes beyond the reach of thought to number. Then from their charnel-house those buried years shall rise, and standing at the base of their Eternal Throne, shall render their stupendous secrets in the presence of a congregated world, while the sky shrivels round them like a scroll, and stars shoot from their spheres, and the vast fabric of creation, rocking in the agonies of earthquake, totters to its fall.

Farewell, dark voyager, unto the shoreless ocean of oblivion, farewell! Thou hast done much of good within thy day, and haply much of evil. Thou hast been to some a messenger of mercy, to some a baleful scourge. Thou hast swung the holy censer, and kindled the flames of conflagration. If the sword and the pestilence were wielded in thy heavy hand, thou hast none the less smiled plenty on the teeming soil, brought affluence to want, and made the desert blossom as the rose. It is for him alone who poises the balance of the universe to weigh thy deeds aright. Whether thy works of blight or benison preponderate; whether thou hast urged along or stayed the march of human progress;

whether thou hast purged this guilty globe, or sunk it deeper into crime, none may declare but he who sitteth on the outer circle of creation, beyond the flaming boundaries of earth. Through the channeled aisles and fretted naves of a thousand grand cathedrals roll the ponderous anthems which swell forth thy dirge. And the voice of nature catches up the sad, sad burden. But sadder still in the lone chambers of the heart, a trampling train of bygone years moves on with hollow tread, and in its echoes wakes the memory of joys forever gone. This is thy requiem, departed year; and thus the burdened spirit takes of thee its last farewell. *Vale!—Vale!*

"Yet, why muse
Upon the past with sorrow? Though the year
Has gone to blend with the mysterious tide
Of old Eternity, and borne along
Upon its heaving breast a thousand wrecks
Of glory and of beauty, yet why mourn
That such is destiny? Another year
Succeedeth to the past. In their bright round
The seasons come and go; the same blue arch
That hath hung o'er us will hang o'er us yet;
The same pure stars that we have loved to watch
Will blossom still, at twilight's gentle hour,
Like lilies on the tomb of day—and still
Man will remain to dream as he hath dreamed
And mark the earth with passion."

JOSEPH W. WINANS, in *Sacramento Union* Dec. 31, 1858.

GLIMPSES.

WHEN the lost traveler's weary heart is sorest,
As the storm rages o'er the midnight sky,
The finger of the lightning through the forest
Points to the friendly village sleeping by.

So God, in the deep fullness of his pity,
Reveals by sudden flashes to our sight,
The shadowy outlines of that glorious city,
Where in his radiance there is no more night.

Sometimes there glimmers, as a star at twilight,
A ray that seems to heaven a guiding mark;
Anon, a flood, as from a wondrous skylight,
Till the full soul, blinded with light, grows dark.

All the day long, as on a stream-swept willow,
The waves of care our aching spirits rock;
But night brings visions to the peaceful pillow,
That all the sorrows of the daylight mock.

As through cathedral walls are heard the whispers
Of solemn voices murmuring the mass;
Or through the chapel door, at twilight vespers,
In vapory clouds the sacred perfumes pass.

So echo the voices of departed legions,
In the sweet stillness of the midnight hours;
And from the fair fields of God's summer regions,
Creeps the pure incense of undying flowers.

These sights and sounds of moments most entrancing,
Pierce the dark caverns of the doubting mind;
And help our weak hearts, in our slow advancing,
To leave the burdens of the world behind.

O light of lights! strengthen our feeble vision!
O voice of voices! make the whispers clear;
For life would be, indeed, a life elysian,
Could we but feel that thou wert ever near.

EMILIE LAWSON.

THE HAPPY CHRISTIAN HOME.

NOTHING is more sacred in memory, nothing more beautiful and blessed in its influence, than the abiding joy of which the well-spring is in a charming home. If it was ours in childhood, the gentle stream of pleasure it sent forth has cheered and gladdened us along all life's weary way. If

it is ours in manhood, we come to it from the deserts and toil of other scenes, and are evermore refreshed and made stronger and happier by its clear and abundant waters. If both our early and later years have been made by it to exhibit the verdure and the fruits which constitute the value and beauty of life, we have known its designed and delightful power to relieve a world of sin of many of its evils.

As we look back upon the home within which were our cradles and our first experiences, and around which cluster our hallowed memories, we do not find that these relate only to the house, the scenes, or even the dear ones, that all come so freshly before us, summoned by the magic word, "Home"—for not all these compose it—it was more, though we find it difficult to define it. It was the charm that dwelt with it in us—the spirit that breathed in no other place such blessings as were there—the very air that lingered around all its associations, and gave a sacredness to all its routine of daily life, with those who seemed almost a part of ourselves; it was all these that composed our home. The faces of the family, the furniture of the several rooms, the household altar, the family Bible, the rules we were to obey, the books we read, the lessons we received, the papers with which we were familiar, the peaceful hours of fireside converse, and many items more, were all elements of *home*, and helped to form its spell upon us, as they were combined and transfigured by the love that presided over all, and possessed all.

We remember the instruction from the Word of God, the catechism, the primer, and the school-books. And we remember the hours, at evening, when pleasant family reading was enjoyed by all, followed by those varied exercises, with games, and puzzles, and riddles, and charades, and other modes of recreation which seem to have secret bonds in them, with which to unite a family. And we remember the nursery and the play-room, with all their equipments and sports, in which mingled not the children only, but where father and mother loved to come, to be happy with the little ones, while they contributed to their "fun." Yes:

all those faces and scenes, and silver-footed hours, come back to us, in after-life, with indescribable yet real ministry of good; and we feel that they are to be rebuked, if they are not absolutely wicked, who feel no interest in making the childhood of the little ones within their circles as happy as may be, and their home as charming as our Father intended it to be. Such a sunshiny childhood is like a headlight on an engine, sending its rays far out on the track of life, to cheer and guide, whatever the region through which we may pass. Such a home is like the love by which it is made radiant—a perpetual fountain of comfort, and pleasure, and good.—Rev. JAMES EELLS, D.D., in *The Occident*, January 4, 1868.

EARLY HISTORY OF JOSEPH SMITH, THE MORMON LEADER.

KNEW him well before his book was published. He was then a wood-cutter on my farm, more willing to live by his wits than his ax, and worked through the winter, in company with some twenty or thirty others, rough backwoodsmen. He and his two associates built a rude cabin of poles and brush in the woods, covered it with leaves and earth, open to the south, a camp-kettle in front for cooking; and here, at night, around a huge fire, he and his companions would gather, ten or a dozen at a time, to tell stories and sing songs, and drink cheap whisky (two shillings a gallon), and although there were some hard cases among them, Joe could beat them all for tough stories and impracticable adventures, and it was in this school, I believe, that he first conceived the wonderful invention of the golden plates and marvelous revelations. And as these exercises were rehearsed nightly to his hearers, and as their ears grew longer to receive them, so his tales grew the more marvelous to please them, until some of them supposed that he also believed his own stories. But of this fact there

is no proof. He was impudent and assuming among his fellows, but ignorant and dishonest, plausible and obsequious to others, with sufficient low cunning to conceal his ignorance, but, in my estimation, utterly unqualified to compose, even such a jumble of truth and fiction as this book contained.

The most probable theory of its origin that I remember to have heard, is that it was the strange work of an eccentric Vermont clergyman, written to while away the tedious hours of long confinement by nervous debility, and that this idle production, after his decease, fell into Joe's hands, and that having learned something of the gullibility of his cronies, this incidental matter incited in him the first idea of turning his foolish stories to account, and thus enable him to make the surreptitious manuscript the text-book of his gross imposition. I speak understandingly in saying he was shameless as well as dishonest, and I relate a small matter to prove it.

During the winter he was chopping for me, I was in the habit of riding through the clearing daily to see that the brush was piled as agreed, the wood fairly corded, and no scattering trees left uncut, and in this way became well acquainted with the conduct of every man, and on each Saturday took an account and paid the hands. My mode was to ride around while each party measured their ranks and turned a few sticks on the top to show that they had been counted. In this way I one day took Joe's account, he accompanying me and removing the sticks on the top of each rank. After thus going the rounds and returning to the shanty, he said he had another rank or two that I had not seen, and led me in a different direction, in a roundabout way, to wood that I had already measured, but the sticks on top had all been laid back to their places. I saw the trick at once, and could only make him confess his attempt to cheat by re-measuring the whole lot; and all this he thought would have been a fair trick if I had not found it out. So much for the man in small things.

After he had left in the spring, I lost sight of him until my friend Judge Whiting (long since deceased), of the very

respectable firm of Whiting & Butler, attorneys, who was then loaning money on mortgages for a trust company, asked me if I knew any thing about Joe Smith. I told him that I knew him for a great rogue in a small way, when he informed me that he pretended to be a prophet, and was about publishing a Book of Revelations; and had induced two credulous men in Palmyra to apply to him (Judge Whiting) for money on mortgage to publish it. I learned afterward that Joe and an associate had prevailed on a worthy citizen of Waterloo (Colonel C——), who was then in a state of great depression from the recent loss of his wife, to join their fraternity and cast in his lot among them; and that while they were at his house taking an inventory of his effects for the purpose, his son, a spirited young man, came in, and on finding what they were about, threatened them so strongly with a prosecution as swindlers, that they left for the time until his father had recovered from his delusion, and thus escaped them.

I know nothing further of his doings here, but after his removal to Ohio, when he established a bank that failed, I was shown one of his bills, and I recollect that on examining it, I thought the device on the face of it was most admirably appropriate—viz., a sturdy fellow shearing a sheep. —*Rochester Union.*

NO BABY IN THE HOUSE.

No BABY in the house I know—
'Tis far too nice and clean;
No toys by careless fingers strewn
Upon the floors are seen.
No finger-marks are on the panes,
No scratches on the chairs,
No wooden men set up in rows,
Or marshaled off in pairs;
No little stockings to be darned,
All ragged at the toes,
No pile of mending to be done,
Made up of baby-clothes;

No little troubles to be soothed,
No little hands to fold;
No grimy fingers to be washed,
No stories to be told;
No tender kisses to be given,
No nick-names—"Clove" and "Mouse;"
No merry frolics after tea—
No baby in the house.

CLARA DOLLIVER.

GEOLOGICAL FORMATION OF THE RIVER AMAZON.

SUMMARY of a lecture of Prof. Louis Agassiz, at the Cooper Institute, New York:—

This year will witness an event of no small importance to commerce and civilization. It has pleased the Emperor of Brazil to decree that the Valley of the Amazon shall be open to the commerce of the world on September 7th, a great day in Brazil, as it is their Fourth of July. This fact suggests some lectures on the valley, that our community may become acquainted with its physical features and capabilities, and that those who care, may be prepared to avail themselves of the advantages of that great inland sea. Like all other irregularities of the earth, the Valley of the Amazon owes its present appearance to a succession of events occurring at long intervals—to those geological periods which have made our earth what it is now. "In order to understand fully the facts I have been able to collect," said the Professor, "it is necessary to recall a few of those principles necessary for the due appreciation of the geological constitution of any country. I wish I could dispense with the preface, but, unfortunately, geology is not part of our elementary education—it is not always a part of an advanced education—yet as a science it has made such progress that it is a fundamental principle and should be understood by all, just as all understand certain elementary facts pertaining to every branch of human knowledge."

He then explained how no part of the globe owes its present appearance to any sudden change. It has been the result of time. There is no inequality of the earth's surface that does not owe its outline to disintegration, and the form of the sea-shore has been traced out by the waves. There is no tract of land that does not owe its peculiar constitution to geological agencies. This world was once a globe of fire, without an atmosphere, and uncovered by water. Later a crust formed, and still later this crust cooled so that it condensed the vapors that surrounded it. The action of the moon created tides, and their alternate ebb and flow had their own effect in determining the shape of the beds. By the agency of fire and water the earth assumed a form that rendered it habitable, first by one kind of animals and then by another, according as it became gradually cool. The configuration of the earth was changed, first an island, then a continent, appearing above the sea, then gradual modifications of the surface until it was habitable by plants and animals as at present. Some portions of the earth's surface are older than others. Thus in South America, the table-lands of Guiana, are older than those of Brazil, while the range of the Andes is younger. Guiana rose first an island in the middle of the sea, then Brazil sprung up, and lastly the Andes. In the same way the North American Continent was formed, the great Canadian table-land north of the capes, extending from Labrador to the Rocky Mountains, was first formed, then the Alleghanian range, and lastly the Rocky Mountains, the oldest mountain ranges being the smallest in size. The mountain ranges and the serried form of the earth are due to upheavals and contractions. The cooling of the earth produced contractions, and consequently a falling in. Geologists are able to tell from an examination of different strata which is the oldest, with quite as much certainty as an archæologist can determine the age of a coin or of a marble. All deposits are made horizontally, and can only be changed by some effort of nature. Thus we find a regular series of rocks, azoic, silurian, devonian, carboniferous, permian, triassic, jurassic, cretaceous, eocene, meiocene, pleiocene, and the deposits

which are forming at present. It is known that in cretaceous strata, for instance, certain fossils are found, and wherever these are found it is inferred that the strata are of the same age. By such means are the synchronism of strata determined. Following this principle, we can say that Guiana is older than Brazil.

Professor Agassiz then alluded to the constant change going on in the valleys of the Amazon, Orinoco and Paraguay. He stated also that the peculiar form of this continent leads us to believe that formerly it was covered with ice. One of the most remarkable phenomena connected with the Valley of the Amazon, is the immense alluvial deposit which fills the whole bottom of the basin, from the foot of the Andes to the Atlantic, and which has been washed from the side rocks. This will form the subject of the next lecture.—*American Journal of Mining.*

VELOCITY AND FORCE OF WIND.

Appellations.	Mean velocity in Miles per hour.	Feet per second.	Force in lbs. per sq. ft.
Just perceptible	2½	3⅔	·032
Gentle, pleasant wind	4½	6⅔	1·01
Pleasant, brisk gale	12½	18⅓	·80
Very brisk	22½	33	2·52
High wind	32½	47⅔	5·23
Very high wind	42½	62⅓	8·92
Storm or tempest	50	73½	12·30
Great storm	60	88	17·71
Hurricane	80	117⅓	31·49
Tornado, moving buildings, &c.	100	146.7	49·20

HOME PICTURES.

Come! if you care
For pictures most fair,
That brighten the homes of the lowly,
All over our land,
Done by the hand
Of love, that artist most holy.

Here on my knee,
Laughing at me,
This is the picture I'd show you;
How his eyes shine,
This baby of mine,
You'd say he was sweet, if I know you.

Now for the show!
A moving tableau,
('Tis only the baby undressing),
Loosen the strings,
Slip the wee things
Off the plump limbs they were pressing.

Dimples and curves,
Delicate nerves,
See, how he starts when you touch him!
Sister and brother
Crowd close to mother,
Ever delighted to watch him.

Round dimpled chin—
Velvety skin—
Smother the darling with kisses!
How perfect his hand;
Do you think, in the land,
There's a baby that's sweeter than this is?

Nicely he feels!
His rose-tinted heels,
Like bird-wings, are fluttering and flying;
Slip on his gown—
That makes him frown—
Don't spoil the bright picture by crying.

Now, as he lies,
He seems to my eyes,
With the children thus bending around him;
Repeating the scene
Of that Infant serene,
Who rejoiced the wise men when they found him.

BELLE W. COOKE,
in *The Pacific*, January, 1868.

TRIP TO YOSEMITE VALLEY.

By a Lady Correspondent of the "Sacramento Union," June, 1868.

START FROM COULTERVILLE.

E made an odd and picturesque tableau as we stood on the balcony of Coulter's hotel, ready to mount our horses for the Yosemite Valley, the gentlemen looking like a cross-cut between brigadier-generals and highway robbers, and we ladies like so many pages or little peasant chaps in our jaunty and bewitching toilets. Now we confess to nearly a religious veneration for floating drapery, and we certainly feel very queenly in our sweeping robes in the parlor, but this has nothing to do with such a trip. Every lady contemplating this visit anxiously wonders how to dress for it. Common sense tells her that she can not ride along narrow, rock-bound trails, ford streams, climb almost perpendicular, rocky, bush-grown cliffs, liable to accidental slips and tumbles and somersaults, in long skirts. All of our most refined and fastidious ladies who have enjoyed that never-to-be-forgotten trip went prepared with bloomers, or were glad to use scissors and needle in improvising such a suit before getting to the valley. We wore a stiff, broad-brimmed straw hat, a handsomely fitting waist, with a gored skirt reaching just below the knee, bloomer pants with a little band buttoning *ad libitum* above the high-laced, thick balmoral boot, a tiny collar and necktie, and buckskin gauntlets; dress, pants, stockings, and hat of a brown color. We tied a warm sack on the horn of our saddle, but rarely needed it, although we were so early in the season. If we did not look pretty and get along comfortably, then a large number of persons were guilty of perjury, for they vowed we did, and our vanity was perfectly satisfied. So away and away we galloped up the beautiful hills beyond Coulterville, and after refreshments of bread and

milk, and a delightful exploration of Bower Cave, continued on a trail cut in the mountain side, amid wild, romantic scenery. Growing weary toward the close of day, when the wind had commenced a *miserere* in the pine-tree tops, and the primo-basso and prima-donna frogs tuned up for a monster concert, it was with thankful feelings that we saw Black's rose-enwreathed cottages appear. After a delicious rest we were off next morning at an early hour, following the same beautiful flower-embroidered trail, and deeply drinking in the sweet mountain air. A succession of charming tableaux were presented to our sight; now a miner's cabin by a sparkling streamlet down the dimpling dell; then a bewildering flitter of blue-birds and gorgeous butterflies, and graceful squirrels, and frightened bonnie rabbits; then an Indian camp by the moss-covered logs—the dirty, picturesque squaws catching grasshoppers in the meadow beyond; and oh! picture of pictures! the glory of the fresh sunlight over those mountains and the grace of the morning shadows from the pine-trees! Ah, entrancing Parepa Rosa, your "Five o'clock in the Morning" would have been out-caroled by the liquid trill and the flute-notes from linnet and redbreast and blackbird! How our bounding spirits pealed forth in shout and song, frightening a whole tree-full of birds, and making the foot-hills of the old Sierras ring again and again! How exhilarating the ride over the snow-drifts, and how delicious the luncheon on the log by the cool brook. My eyes never beheld such a wealth of tree scenery. Pines and cedars seven and eight feet in diameter, and graceful balsam, fir and spruce, all forming clean-sweeping aisles over the hillsides and down through the sun-flooded dell.

YOSEMITE AND ITS WONDERS.

How the grandeur and overwhelming majesty of that rock scenery thrilled us with a sublime recognition of Jehovah's power, and inspired our senses to a nearer communion with the author of these mysterious wonders? It seemed a fit

place for the Judgment; and I thought of the Crucifixion as I looked upon those cleft mountains.

We saluted El Capitan. This is a magnificent battlement of polished, unscarred granite, nearly 4,000 feet in height; the only ornament on its clean-cut surface a flourishing pine growing out of its side, 2,500 feet from its base—a faithful Picciola in its way.

Sentinel Rock, the Cathedral Spires, and the snow-flecked, sun-gilt Domes—one of them over 6,000 feet in height—impressed me inexpressibly.

We climbed the difficult, slippery rocks, and, drenched by the mist, clapped our hands and shouted in ecstasy as we stood in the sway of the Bridal Veil (940 feet in height), enwreathed with rainbows of the most gorgeously defined colors. Transported with the beauty of the scene, I fancied old Kuhleborn rising from the running waters, and seemed to hear the sweet voice of Undine—(Undine! what beguiling melody in the name!)—as she floated down like a pure white dove in the wafting spray. I was awakened from this enrapturing and seductive dream by one of our chivalric Huldbrands drawing me away from my dangerous position. So I pleased my fancy by calling the unnamed cataract into which these waters fell, Undine's Retreat. Then on the opposite side of the valley we sprang from rock to bowlder over the torrent, to revel in the beauty and grace of the Ribbon Fall.

In our visit to the lower Yosemite Fall, we walked over an immense ice-bridge, thirty feet in thickness, which spanned the cataract into which the whole fall of 2,600 feet plunged. The furious, maddened waters, tore down the rocky chasm, occasionally excavating and breaking away portions of this bridge. The heat of the rich green, silver firs, melted the snow and ice away from their bark, leaving a depth of from thirty to forty feet down which we could look into the furious cataract. We conceived the happy idea of further gratifying our curiosity by creeping on all-fours to the extremest, dangerous slippery point, and looking into the awful basin; the sight was fearful. The waters rushed and surged and tore madly down among the rocks and

GENERAL VIEW OF THE YOSEMITE VALLEY, FROM INSPIRATION POINT.

bowlders like demons, and the noise, with that of the falls, was like thunder. Growing still bolder on our carteb-lanche privileges, we walked a big log over one part of the broken bridge, and hunching along in bifurcated style on a thin pine for forty feet across this dizzy torrent, we came to a spot from which we could see what a fearful risk we had run in lying down and looking over from that ice point. It appeared like a great clear-cut white clipper-ship of ice, perfect in style and grace, plowing through the raging waters; and from the thin crust of the bow several of us had thrown our whole weight in order to peer overboard. Coleridge's "Ancient Mariner" all loomed up before me in a strange, weird way.

I remember Hutchings saying that at the base of this upper fall, last winter, an immense hill of snow and ice formed, the gently falling waters wearing a basin forty feet deep in it, into which, later, as the water increased in volume, the sixteen hundred feet fall pitched, rebounding to a height of six hundred feet, fluting out like a fountain, the whole covered with rainbows.

We climbed the rocky, exhausting trail to this point. Looking up the awful chasm, through the drenching spray, we beheld the Yosemite River, from its foaming brink, fall 1,600 feet in loops and curves and rockets, spending themselves and re-forming and thundering down the chasm, the foam and mist, with a wonderful grace, rolling up and softening away some of the terror from the scene. Pillars of snowy clouds drifted about the peaks, seeming to melt into the bosom of the waters. All around us were those fear-inspiring Egyptian walls, and far, far below us the lovely, peaceful meadow-land, its 200-feet pines appearing like mere bushes, and its streams and lakes like lines and spots of silver.

Then homeward returning, the valley bird's flute-notes to the accompaniment of that grand organ, we culled and pressed the tenderest, tiny white violets, that peeped like snow-flakes from the grass, and magnificent azalias and radiant oriflamme blossoms, and delicate leaves and ferns from the bank-side of the bonny Merced (River of Mercy).

It is a hard climb to and up the ladders, and thence past the Vernal to the Nevada Fall of 700 feet. We made an awkward-looking squad on that forced march. Think of us ladies, completely lost in gentlemen's india rubber coats and boots (number eights), our lovely immense hats wilted, and, led by an elegant fastidious Parisian who couldn't speak a word of English, but was having a good time in *mon Dieu*-ing, and was forever *si charme* and *si fatigue*, and *tout mouille* and *tout tue*—angry one minute and full of graceful compliments to the ladies the next, who looked more like Satan's imps than like things of beauty, or any prospect of being a joy forever.

The Nevada coquettishly floats off to one side and falls and pauses, and falls and plays hide-and-seek among the rainbows till it plunges into the river. Here we crept on to a log that had drifted out, and sat enjoying the most enchanting sight imaginable. The waters tumbled and capered among the rocks for a long distance, then dashingly swept down a long, smooth, inclined plane of granite. Then lashing up in snowy-capped waves, flashing in the sunlight, they rushed on tumultuously, driving over the cliff, thus forming the Vernal Fall of 350 feet. This cataract of diamonds, with its wealth of rainbows, assuredly takes precedence in fascinating beauty. There is a delightful point from which no sketch has ever been made. From the top of the ladders the side view of the Vernal, the Cap of Liberty beyond, and the curving, emerald-tinted foam sweeping in cascades and off in a willful line of grace down the valley—this is one of the loveliest pictures that hangs on my memory's wall.

As to Mirror Lake, it is gloriously beautiful. As we shot at a mark on its margin, my very hat seemed fascinated by the spirit of beauty smiling from its ripples and ambitioned to sail over it. Luckily, thanks to a good deal of screaming and a long fishing-pole, the truant was towed back and anchored on a rock to dry, whilst I wandered about getting wild flowers and new impressions every moment—especially of tan. I must have been an enchanting picture of dejection and defeat as I planted the wilted hat on my head and

walked along over the rocks to the horses, with a melancholy, Robert Macaire appearance.

But every lake and puddle in the whole valley is a clear mirror, with the falls reversed and the walls also, the pines on their summits looking like tassels and fringes in the reflection.

But no painting by word, or pen, or color can convey to any one those soul-filling pictures, which I wish all lovers of nature could themselves see and feel, and put away in the treasure-house of beautiful and glorious things, to carry with them a joy forever!

HISTORICAL RECORD.

THE following is a list of Presidents and Vice-Presidents of the United States, as well as those who were candidates for each office, since the organization of the Government:—

1789.—George Washington and John Adams; two terms without opposition.

1797.—John Adams, opposed by Thomas Jefferson, who, having the next highest electoral vote, became Vice-President.

1801.—Thomas Jefferson and Aaron Burr, beating John Adams and Charles C. Pinckney.

1805.—Thomas Jefferson and George Clinton, beating Charles C. Pinckney and Rufus King.

1809.—James Madison and George Clinton, beating Charles C. Pinckney.

1813.—James Madison and Eldridge Gerry, beating De Witt Clinton.

1817.—James Monroe and Daniel E. Tompkins, beating Rufus King.

1821.—James Monroe and Daniel E. Tompkins, no opposition, and only one dissenting vote.

1825.—John Q. Adams and John C. Calhoun, beating Andrew Jackson, Henry Clay, and Mr. Crawford, there being four candidates for President, and Albert Gallatin for Vice-President.

1829.—Andrew Jackson and John C. Calhoun, beating John Q. Adams and Richard Rush.

1833.—Andrew Jackson and Martin Van Buren, beating Henry Clay, John Floyd, and William Wirt for President, William Wilkins, John Sargent, and Henry Lee for Vice-President.

1837.—Martin Van Buren and Richard M. Johnson, beating William H. Harrison, Hugh L. White, and Daniel Webster for President, and John Tyler for Vice-President.

1841.—William H. Harrison and John Tyler, beating Martin Van Buren and I. W. Tazewell. Harrison died one month after his inauguration, and John Tyler became President for the remainder of the term.

1845.—James K. Polk and George M. Dallas, beating Henry Clay and Theodore Frelinghuysen.

1849.—Zachary Taylor and Millard Fillmore, beating Lewis Cass and Martin Van Buren for President, and William O. Butler and Charles F. Adams for Vice-President.

1853.—Franklin Pierce and William R. King, beating Winfield Scott and W. A. Graham.

1857.—James Buchanan and John C. Breckinridge, beating John C. Fremont and Millard Fillmore for President, and William L. Dayton and A. J. Donelson for Vice-President.

1861.—Abraham Lincoln and Hannibal Hamlin, beating Stephen A. Douglas, John C. Breckinridge, and John Bell for President, and Edward Everett, Herschel V. Johnson, and Joseph Lane for Vice-President.

1865.—Abraham Lincoln and Andrew Johnson, beating George B. McClellan and George H. Pendleton.

1869.—Ulysses S. Grant and Schuyler Colfax, beating Horatio Seymour and Frank P. Blair.

NOSE BLEED.

HERE are two little arteries which supply the whole face with blood, one on each side; these branch off from the main arteries on each side of the windpipe, and running upward toward the eye, over the outside of the jaw-bone, about two-thirds of the way back from the chin to the angle of the jaw, under the ear. Each of these arteries of course, supplies just one-half the face, the nose being the dividing line; the left nostril is supplied with blood by the left artery, and the right nostril by the right artery. Now suppose your nose bleeds from the right nostril; with the end of the right fore-finger feel along the outer edge of the right jaw until you feel the beating of the artery directly under your finger, the same as the pulse in your wrist, then press the finger hard upon it, thus getting the little fellow in a tight place between your finger and the jaw bone; the result will be that not a drop of blood goes into that side of your face while the pressure continues; hence the nose instantly stops bleeding for want of blood to flow; continue the pressure for five or ten minutes, and the ruptured vessel in the nose will by that time probably contract so that when you let the blood into them they will not leak. Bleeding from a cut or wound anywhere about the face may be stopped in the same way. The Creator probably placed these arteries as they are that they might be controlled. Those to the back of the head, arms and legs, are all arranged very conveniently for being controlled in like manner.

COL. M'CLURE ON WESTERNISMS.

OT only the renowned mountains of the far West, but also the peculiar people who inhabit them, present endless novelties to the tourist. Of the bewildering beauty of these ranges—whose cliffs, and cañons, and plains have been ever present through a journey of over one thousand miles, and still seem to be endless—I have written before, but of the people with whom I have mingled so pleasantly, I have not had time to speak until now. The whole civilized world does not furnish a more cordial, frank and hospitable class of citizens. Mutually dependent upon each other, they cultivate the highest measure of true neighborly kindness; their humble homes and frugal boards offer shelter and bread to the stranger, and the children of want are not turned away in sorrow from their doors. With them comes crime armed with power and wealth, and defiant of order and authority, but there are many nameless graves to attest the stern retribution of the honest settler, as he cleared the path of the bullet and dagger, and made his treasure safe from the incursions of the robber. They are eminently social, and their peculiar terms have a significance with which the more cultivated East has no knowledge. In all classes, from the most learned to the least favored in letters, the same expressive Westernisms are in common use. If a man is embarrassed in any way, he is "corraled." The Indians "corral" men on the plains; the storms "corral" tourists in the mountains; the prisoner is "corraled" in prison; the tender swain is "corraled" by crinoline; the business man is "corraled" by debt or more successful competitors in business; the unfortunate politician is "corraled" by the mountaineers, the gulchmen or the settlers; the minister is "corraled" when he is called to become the pastor of a congregation; and the gambler "corrals" the dust of the miner. Indeed, the application of the term is almost as indefinite as it is universal. "Git" is another of

the favorite and most expressive of Western terms. It is the invariable word by which the hero of the whip and lines starts his teams, and they understand it well. "You git," is the most emphatic notice that can be given to any luckless chap to leave the room, ranch, or escape a revolver, and "you bet," is the most positive manner of affirming what you say. Every thing is an "out-fit," from a train on the plains to a pocket-knife. It is applied almost indiscriminately—to a wife, a horse, a dog, a cat, or a row of pins. A "lay-out," is any proposed enterprise, from organizing a State to digging out a prairie-dog. Any thing that has been tried, from running for Congress to bumming a drink, has been "prospected" or "panned out," and he "didn't get a color," explains the saddest of failures. When a Western man declines any proposition, he "ain't on it," he "don't go a cent on that," or "none of that in mine," is the answer. When he wants to deal or fight with a man, he proceeds to "go for him," and "I'll bet my bottom dollar" is the strongest backing to his expressed opinion. "The man in the wagon," is the author of all sayings and doings which can find no visible or responsible source. When the miner goes for the savages, he "cleans 'em out to the bed-rock," and when the braggart is to be silenced he is informed that "nobody's holding you," or "there's no weights on your coat tails." When one gets the decided advantage of another, whether in deadly conflict or in business, he "has the drop on him." The universal term for eatables is "grub," and the most degrading epithet that one can apply to another is to pronounce him "a bilk." No Western man of pluck will fail to resent such concentrated vituperation. The term was entirely novel to me, and I first asked its meaning of a landlord, who explained by saying that "a 'bilk' is a man who never misses a meal and never pays a cent." There are many others equally original and expressive which I have heard often, but I can not now recall. Used as they are by all classes, in business and social circles, and by both sexes, they have become part of the language of the country, and a stranger's fitness for Western life is judged by his readiness in acquiring the use of them.

KATIE LEE AND WILLIE GRAY.

Two brown heads with tossing curls;
Red lips shutting over pearls;
Bare feet white and wet with dew,
Two eyes black and two eyes blue;
Little boy and girl were they,
Katie Lee, and Willie Gray.

They were standing where the brook,
Bending like a shepherd's crook,
Flashed its silver; and thick ranks
Of green willow fringed the banks;
Half in thought, and half in play;
Katie Lee, and Willie Gray.

They had cheeks like cherries red;
He was taller—'most a head;
She with arms like wreaths of snow,
Swung a basket to and fro,
As she loitered, half in play,
Chattering to Willie Gray.

"Pretty Katie," Willie said,
And there came a dash of red
Through the brownness of his cheek
"Boys are strong, and girls are weak,
And I'll carry, so I will,
Katie's basket up the hill."

Katie answered with a laugh,
"You shall only carry half,"
And then tossing back her curls,
"Boys are weak as well as girls."
Do you think that Katie guessed
Half the wisdom she expressed?

Men are only boys grown tall,
Hearts don't change much after all;
And when long years from that day,
Katie Lee and Willie Gray
Stand again beside the brook,
Bending like a shepherd's crook,

Is it strange that Willie said—
While again a dash of red
Crossed the brownness of his cheek—
"I am strong and you are weak;
Life is but a slippery steep,
Hung with shadows, cold and deep.

"Will you trust me, Katie dear?
Walk beside me without fear;
May I carry, if I will
All your burdens up the hill?"
And she answered with a laugh—
"No, but you may carry half."

Close beside the little brook,
Bending like a shepherd's crook,
Washing with its silver hands,
Late and early at the sands,
Is a cottage, where, to-day,
Katie lives with Willie Gray.

UNDERGROUND STREAMS.

THE GREAT LAKES OF THE NORTHWEST SUPPLIED FROM INVISIBLE SOURCES.

IF we take down the map of North America, and follow around the borders of our chain of great lakes, we will find that the tributaries for supplying the mighty torrent of water which pours in immense volumes over the Falls of Niagara, and thence through the St. Lawrence to the sea, are few in number and insignificant in effect. Lake Superior, the largest body of fresh water in the world, has an area of 32,000 square miles, and a mean depth of 1,000 feet. There are a few small streams, none worthy of the name of rivers, which find their outlet in this lake—the St. Louis and Ontonagon are the largest of these; but there is probably not water enough discharged into the lake to make up for the atmospheric absorp-

tion and evaporation. The entire State of Wisconsin, even from the very borders of Lake Superior, is drained by rivers, which flow into, and are tributaries of, the Mississippi. These are, in chief, the Wisconsin River, the Black, Chippewa, Fox, and Rock rivers, the waters of which flow southward to the Gulf of Mexico. The whole State of Minnesota, with its thousands of lakes and streams, may be called the mother of the Father of Waters; for all of her waters which do not gather into the great Red River of the North, are discharged into the Mississippi, and do not contribute to keep up the supply of Lake Superior, and on the northern shore of the lake, in the British possessions, there are no rivers which flow in this direction. Here the current is the other way, and the streams find their way to Hudson's Bay and other more northerly seas. The outlet of Lake Superior is the River St. Mary's—a stream of considerable magnitude—which discharges the surplus waters of the lake in the direction of Lake Huron. Lake Superior is 627 feet above the sea-level.

If we examine the surroundings of Lake Michigan, we shall find the evidences of this theory still more striking. This lake has an area of 32,400 square miles, and a mean depth of 900 feet. It is above the sea-level 578 feet, or 49 feet below Lake Superior. It is also an immense body of water, whose sole apparent sources of supply are found in a few small streams which flow into it from the State of Michigan.

The largest of these are the Grand and Manistee rivers; from Wisconsin there is only one small stream, the Milwaukee River at Milwaukee. From Illinois there is only the Chicago River, a sluggish stream without a current; and, indeed, there is, at only ten miles distance from the banks of the lake south and west, the water-shed called the Summit, which separates the waters which flow into the St. Lawrence from those which flow into the Gulf of Mexico, and from the southern slope of this Summit, flowing southward is the Aux Plaines River, a tributary of the Illinois. So that Lake Michigan gets no water from Illinois, but a trifle from Wisconsin, and very little from Michigan. And yet the Straits

of Mackinaw carry off a large quantity of water from this lake, and Lake Michigan furnishes its due proportion of the great current which passes over the Falls of Niagara. Now, the question arises, whence comes this great volume and mass of running water.

Geologists are tolerably familiar with the subject of underground streams and water-courses. They know that the crust of the earth is full of these streams, and although from the fact that they are generally concealed from sight, there must be considerable speculation concerning them, yet there are cases, such as in the Mammoth Cave in Kentucky, the Adelberg Mountains in Switzerland, and numerous artesian wells scattered all over the world, the lost rivers on our Western prairies, &c., from which a positive knowledge may be derived concerning the nature and history of these rock-bound rivers.

The artesian wells in London furnish now about 12,000,000 of gallons of water daily. This is the seepage of the valley in which the great city is located. The water from the whole country surrounding finds its way along the tilts and inclinations of the broken strata, below the chalk beds, in among the sands and gravel, from whence it is taken by boring into the ground to the depth of about 600 feet. It does not appear probable that there are any very considerable streams in this vicinity, for the entire of the underlying gravel beds seem, as it were, perfectly saturated with water, which is reached at any point of perforation.

These remarks apply to the wells of Grenelle and of Passy, in the basin of Paris, with the exception in the case of the latter that they struck an amazing stream of water 1,800 feet below the surface, which discharges nearly 6,000,000 of gallons per day, rushing to the surface with great power and velocity. This is strong evidence, certainly, of a great underground current at that point. The great wells of Kissingen, in Bavaria; at Munden, in Hanover; at Louisville, in Kentucky; Charleston, S. C., and hundreds of others, many of which are 2,000 feet deep, discharging great volumes of water—all tend to demonstrate the fact that the crust of the earth is penetrated in all

directions and at all depths with these streams and water-courses.

Adopting this as a conceded fact, let us once more turn to the map of North America and note particularly the point where the thirty-second degree of west longitude crosses the forty-fourth parallel of north latitude. Within a radius of 500 miles, of which this is the center, will be found the great water-producing region of the West. In this elevated and comparatively uneven surface of the country, nearly all of the great rivers of the West have their sources and fountain-heads. First the Missouri, with its innumerable tributaries, among which are the Yellowstone and the North Fork of the Platte, the Arkansas, the Red River, the Rio Grande, all flowing from the eastern and southern slopes of the Rocky Mountains, and finding their way through thousands of miles of country to the Gulf of Mexico. On the western slope is the Rio Colorado, which empties into the Gulf of California, and which is formed by the union of Grand and Green rivers, the sources of which are also in the territory above-mentioned. The same statement is true of the Columbia River, flowing through the State of Oregon into the Pacific, and of the other great streams and rivers which flow northward and westward into the Pacific and the Northern oceans. Thus the knowledge we already possess of the surface streams of this great extent of territory all tend to demonstrate the truth of the theory in relation to the water-producing region, its location, extent, and capacity, and also that on the surface there is but comparatively a small amount of this water which finds its way into our great lakes.

It is a well-known fact to travelers on our Western plains that large streams, often rivers in size, suddenly disappear, falling away into fissures and chasms, sometimes reappearing, but more frequently lost forever. Where, and in what manner, does this water find an outlet? What becomes of the mass of water which falls upon the earth and is absorbed by the soil and the rocks below the beds of rivers and streams? The crust of the earth abounds in waters to unknown depths, and from the nature of the element, it must

create for itself ways and courses of travel, as plainly beneath as upon the surface. And now, if the great lakes are not supplied by means which are upon the surface and apparent to the eye, it follows as a natural consequence that their sources of supply must be underneath the ground. The outlet of these lakes discharges an enormous quantity of water, the visible inlets are mere trifles in comparison—and thus there seems to be no other conclusion on the subject but that the supply comes from below the surface of the ground. This water probably finds inlets at different points on the bottoms of the lakes, and maintains the supply with as much certainty and regularity as if the streams were running on the surface of the ground. This theory is further, and I think more particularly demonstrated, by the great mass and volume of water which is now being discharged by the Chicago artesian wells. These are over 700 feet deep—nearly penetrating the earth to a line parallel with the bottom of Lake Michigan—are located in no great valley or depression, such as the basins of Paris or London. The water has a head of nearly 125 feet above the level of the lake; is much colder than the mean temperature of the location of the wells, being 57 degrees Fahrenheit; these facts tending to show that it must come from a more elevated region of country, and also from a higher latitude. There are two other facts corroborative of this point: When the water was first struck, the temperature was 59 degrees Fahrenheit; it has fallen now two degrees, or to 57. Then the first analysis of the water exhibited 72 grains to the wine gallon of mineral matter held in solution; the second analysis, made only one year afterward, showed only 56 grains of the same matter. These facts, taken in connection with the great head of the water, seem to establish conclusively that it comes from some remote region of the north or northwest.

It is also probable that the great underground stream penetrated by these wells once discharged its waters into the bottom of Lake Michigan; but this outlet was closed by the upheaval of the earth's crust, which is visible at the point of the location of these wells, and at the present time

there is no outlet except the artificial one made by the drill. This supposition is proved by the head and the great force and power of the water, for if it had a lower outlet any thing like the size of the stream, it would not show a head much, if any, above the surface of the ground; and it is also sustained by the facts above stated—first, the decrease of the temperature of the water from 59 degrees to 57 degrees, and the diminution in the quantity of mineral matter held in solution—the latter fact seeming clearly to prove that prior to the time when the drills penetrated the stream, the water had dissolved and absorbed a large quantity of the soluble matter of the rocks with which it came in contact in its state of rest. As soon as an opening or outlet was made, and a quantity of water was discharged, this mineral matter decreased in proportion, and the probability now is that the water will become softer and purer as the amount discharged becomes greater, and that eventually, and probably at no distant day, the water will come from its fountain-head simply filtered and purified by its passage through the sandstone and gravel beds.

That the outlet of the stream into Lake Michigan was closed by the volcanic upheaval of the earth and rocks, is a probable conclusion, which can be verified by an inspection of the grounds on which these wells are located. The surface is only some seven or eight feet above the level of the surrounding prairie; but geologically or strata-graphically, it is nearly 150 feet above the common level of Chicago—that is, at about one mile distant eastward and into the city. We bore into the soil nearly 150 feet before reaching the same rock which is here exposed upon the surface, and at the well bored at the Chicago Distillery Company's premises on the North Branch, they penetrated the Joliet marble at a depth, I believe, of 186 feet, which, at the other point, is only 29 feet from the surface. This and various other facts show the nature and extent of the convulsion; and that it was no difficult feat of nature to dam up this comparatively trifling underground stream and leave its waters pent up in the rocks and caverns for the future use and benefit of man.

I don't know that these speculations will be of sufficient interest to make them public, but they may have the effect of directing some abler pen to the solution of the problem as to the sources from whence the great lakes derive their supply of water.

GEO. A. SHUFELDT,
in the *Chicago Tribune*, November, 1866.

THE WANDERING JEW.

HE legend of the Jew, ever wandering and never dying, even from the crucifixion of Jesus to this day, spread over many European countries. The accounts, however, as in all fables, do not agree. One version is this: When Jesus was led to death, oppressed by the weight of the cross, he wished to rest himself near the gate at the house of Ahasuerus. This man, however, sprang forth and thrust him away. Jesus turned toward him, saying, "I shall rest, but thou shalt move on till I return." And from that time he has had no rest, and is obliged incessantly to wander about. Another version is that given by Mathias Parisiensis, a monk of the thirteenth century:—When Jesus was led from the tribunal of Pilatius to death, the door-keeper, named Cartafflious, pushed him from behind with his foot, saying, "Walk on, Jesus, quickly; why dost thou tarry?" Jesus looked at him gravely, and said, "I walk on, but thou shalt tarry till I come." And this man, still alive, wanders from place to place, in constant dread of the wrath to come. A third legend adds that this wandering Jew falls sick every hundred years, but recovers, and renews his strength; hence it is that, even after so many centuries, he does not look much older than a septuagenarian. Thus much for the legends. Not one of the ancient authors makes even mention of such an account. The first who reports some such

thing is a monk of the thirteenth century, when, as is known, the world was filled with pious fiction, even to disgust. However, the story has spread far, so that it has become a proverb, "He runs about like a wandering Jew." There are not persons wanting who assert that they have seen the Wandering Jew; but when their evidence is examined by the test of historical credibility, it is found that some impostor had made use of this fable to impose upon simple-minded people for some purpose of his own.—*S. F. Mirror*, August 24, 1860.

DEPTHS OF MINES IN ENGLAND.

N English journal, after valuing the total product of the mines of England at £41,431,102 per annum, and computing that England's supply of coal will last at least seven hundred years longer at the present rates of consumption, gives the following account of the depth to which the bowels of the earth have been pierced in England:—

The depth to which we mine for coal is already great. The pit at Duckenfield, in Cheshire, is 2,004 feet below the surface of the point where it intersects the "Black Mine Coal," a seam which is four feet six inches thick, and of the best quality for domestic and mining purposes. From this point a farther depth of five hundred feet has been attained by means of an engine plane to the bed of coal, so that a great portion of the coal is now raised from the enormous depth of 2,504 feet. At Pendleton, near Manchester, coal is daily worked from the depth of 2,125 feet; and the cannel coal of Wigan is brought from 1,773 feet below the surface. Many of the Durham collieries are equally deep, and far more extended in their subterranean labyrinths. Some of those, and others in Cumberland, are worked out far under the bed of the sea; and on both sides of the island we are rapidly extending our subterranean burrowing.

Dolcoath tin mine, in Cornwall, is now working at 1,800 feet from the surface, and is rapidly sinking deeper. The depth of Tresavean, a copper mine, is 2,180 feet. Many other tin and copper mines are approaching these depths; and under the Atlantic waves, in Bottallack, Levant, and other mines, man is pursuing his labors daily at half a mile from the shore. To aid the miner in these severe tasks, gigantic steam engines, with cylinders one hundred inches in diameter, are employed in pumping water from these vast depths. Winding engines, which are masterpieces of mechanical skill, are ever at work raising the minerals from each dark abyss, and also "man engines," of considerable ingenuity —so-called, because they bring the wearied miners to the light of day, thus saving him from the toil of climbing up perpendicular ladders—are introduced in many of our more perfectly conducted mines. Our coal costs annually one thousand lives, and more than double that number of metalliferous miners perish from accidents in the mines, or at an unusually early age—thirty-two—from disease contracted by the conditions of their toils. By the industry of our mining population there is annually added to our national wealth considerably more than £30,000,000. This, when elaborated by the process of manufacture, is increased in value tenfold. While we are thus drawing upon that "hoarded treasure, guarded by dragons white and red," which the enchanter Merlin is fabled to have concealed in the caves of the earth, we should not cease to remember how much of mental labor and muscular power is expended, and how large a percentage of human life is annually sacrificed in the contest with those hydra-headed evils which are truly personified by the dragons of the legend.

THE CHASMS OF THE COLORADO.

BY A. HYATT.

N Niagara we readily realize the power of demolition attributed to its waters. The Fall is still receding, the ground is shaken under us by its blows, the chasm it has cut yawns before our eyes. But it is another and far different matter to recognize the same force in other localities, where, perhaps, a puny stream, depleted by the summer heats, trails along the center of some deep gorge.

Here the observer must remember that time has no boundaries in geology; that existing causes, provided they are capable of carrying away ever so small a portion of solid earth and rock now, would, in ages past, have had opportunity enough to have destroyed the whole of the rocky core which once filled the ravine.

Let him descend and look at the tottering pinnacles threatening him from above, and then examine those that have already fallen. The layers of the shattered masses are open to the ice-wedges in winter, the grinding and transporting power of the spring freshets, the alternate heat of noon and cold of night. Acted upon also by the oxygen of the air, the acids in the water now dry, now wet, is it a wonder that they are covered by a coat softer than the interior of the rock, which is readily ground off or dissolved by the stream? The rusty coating of iron arises from the same causes, and yields in the same way when exposed to similar influences, until the hard metal has entirely disappeared.

The lofty ledges themselves are constantly crumbling, the finer dust swept away by the winds, and the heavier pieces plunging to the bottom. Every rain carries away, in solution, the dust, which the winds have spared, and a portion of the softened outer-coatings of the stones.

Watch the bottom of any fast-running rivulet, you will see a moving cloud of the finest particles, and under them larger pieces rolling confusedly onward. The larger pieces are slowly but surely wearing themselves away, and the

moving cloud is the result of this grinding. Thus it is that nearly all the stones found in brooks are pebbles. When first broken away from the parent rock they must have had sharp edges like any other fragment. Have you never found a piece of a bottle in the bed of a stream, with the edges nicely smoothed, and the sides scratched and scored like ground glass? They are quite common, and show how pebbles are made with perfect accuracy.

Quietly and almost imperceptibly the tireless waters work, except when heavy rains or spring freshets, muddy and discolored with their burden of dust and dissolved rock, move even large bowlders and destroy well-known landmarks. The ability of water to handle rocks of any size, provided it is deep enough and swift enough, is unquestioned. In the Au Sable River, where the inclination of the shelving rock which formed the bed was not over two or three degrees, or the depth more than eighteen inches, I have myself, by the aid of a lever, rolled into the current great pieces of sandstone, three or four feet long and a foot thick, and heard their heavy rumbling over the ledge as they were carried away. Among the shales, limestones, and sandstones, ravines of this description are common; and in these sedimentary rocks where layer answers to layer on either side of the gorge, there can be but little doubt that water has carved them out. In the more disturbed localities, however, where the stratification is obscured, it becomes difficult to determine whether the chasms were not originally great cracks in the earth, subsequently enlarged by the grinding and transporting power of the stream. The Colorado of the West affords the best illustrations of these two kinds which have yet been seen by man. In its lower part the rocky sides of the cañons are cut out of strata highly inclined and disturbed, where they have been bent upward to form the mountains, while in its upper portion they are perfectly horizontal.

Two rivers, the Green and the Grand, rise at the western bases of the Rocky Mountains, ten or twelve thousand feet above the sea, one in southwestern Nebraska, the other in southeastern Oregon, and are said to unite their streams

near the southern boundary of Utah, to form the Colorado of the West. This then flows southwesterly, and empties into the Gulf of California. The descent is accomplished at first by a grand cañon cut through a succession of elevated plateaux, called Mesas, which spread out westward from the base of the Rocky Mountains, like a gigantic stairway, each step a thousand feet or so in height and many miles in breadth, and in its lower part by a series of cañons through ranges of mountains.*

The engraving accompanying this article shows the northwestern prolongation of the Purple Hills, which form the first three cañons in the river. The two pinnacles of "Chimney Peak," looming up in the background, are composed of trap. This, being much harder than the material of the neighboring rocks, has yielded less to the action of the elements, and shows how vast has been the denudation which has destroyed them. Professor Newberry estimates that in some cases the wearing away of the mountain masses has been upon such a grand scale, that now they are only half their original size.

The Mojave Cañon, the fourth or fifth through which one passes in ascending the river, is described by Lieutenant Ives as follows: "A low, purple gateway, and a splendid corridor with massive red walls, formed the entrance to the cañon. At the head of this avenue, frowning mountains, piled one above the other, seemed to block the way. A sharp turn at the base of the apparent barrier revealed a cavern-like approach to the profound chasm beyond. A scene of such imposing grandeur, as that which now presented itself, I have never before witnessed. On either side majestic cliffs, hundreds of feet in height, rise perpendicularly from the water. As the river wound through the narrow inclosure, every turn developed some sublime effect or startling novelty in the view. Brilliant tints of purple, green, brown, red, and white, illuminated the stupendous

* From the Editors of the *American Journal of Arts and Sciences*, who received both this and the "Chasm" through the kindness of Prof. Newberry. The results of the last exploration of the Colorado of the West by Prof. Newberry, on the San Juan Expedition, are still unpublished.

CHIMNEY PEAK.

surfaces and relieved their somber monotony. Far above, clear and distinct upon the narrow strip of sky, turrets, spires, jagged, statue-like peaks and grotesque pinnacles overlooked the deep abyss."

To this succeeds the Painted Cañon, whose exquisitely tinted walls, though less grand, seem to have excited the artistic taste of the explorers not less than the Mojave Cañon. Then occurs the Black Cañon, where, for twenty-five miles, the narrow river plunges through the sunless depths of the Black Mountains, the precipices on either side rising perpendicularly a thousand feet or more from the water. The little band, in their frail boat, were buried in this fearful gorge for two days, and one follows them through the difficulties and dangers of the pass with breathless interest.

The walls of these cañons, according to Dr. Newberry, the geologist of the expedition, are formed of great masses of granite, porphyry, trap, and other volcanic rocks, with layers of highly crystalline limestone and conglomerates, which are of equal heights, and correspond exactly on either side of the river. The unavoidable inference from these facts is, that the mountain ranges, of which there are several besides those I have mentioned, once crossed the bed of the river and dammed back its flow, filling the valleys between with extensive lakes. These were probably connected by a series of cascades and rapids, which must have been of unparalleled beauty and grandeur; but as Niagara is destroying itself, so have they destroyed themselves. The stupendous precipices, so graphically described by Lieutenant Ives, are the trophies of their unconquerable power, the remnants of those mountain barriers through which the cataracts ate their way and drained the great lakes of the interior.

These chasms, however, with their thousand feet or so of granite and solid porphyries, are but the outer gates preparing the mind for the awful sublimity of the Great Cañon. The local disturbances or oscillations which gave rise to the wild scenery of the lowlands, tossing their originally horizontal layers into lofty mountainous waves, have made no impression upon its walls. The level courses of sandstone,

limestone, and shale, lie upon a bed of granite, of itself a thousand feet thick, without a bend or fault to mar their perfect parallelism. The entire thickness of the first great mesa or plateau, west of the Rocky Mountains, is exposed in the cliffs, and the edges of the severed plain hang in the air over a mile above the river.

"This scenery," says Lieutenant Ives, speaking of a side cañon down which they passed some seventeen miles to the river, "much resembled that of the Black Cañon, excepting that the rapid descent, the increasing magnitude of the colossal piles that blocked the end of the vista, and the corresponding depth and gloom of the gaping chasms into which we were plunging, imparted an unearthly character to a way which might have resembled the portals of the infernal regions." No attempt is made to describe the Great Cañon itself. The explorers seem to have succumbed to the awe created in their own minds, and yielded the greatest homage they could have paid to the unearthly nature of the scene—silence. For three hundred miles the precipitous walls vary from three thousand to six thousand feet in height, and on every side the plain is furrowed by the tributaries, so that "fissures, so profound the eye can not penetrate their gloomy depths, are separated by walls whose thickness one can almost span, and slender spires that seem tottering upon their bases, shoot up thousands of feet from the vaults below."

The country is impassable to man and beast, and none but birds can explore the cavernous abysses. The solitude is unbroken, and the inhospitable rocks deserted, save by a few Indians who drag out a wretched and monotonous existence among the subterranean passages. No vegetation clings to the sides of the cañon or covers the broken surface of the mesa; all is alike naked and savage. The second illustration gives a view of the general aspect of the surface, with other mesas rising in the distance.

The chasm at Niagara excites much wonder, but what shall be said of this? The horizontal strata, answering layer to layer upon either side, are witnesses that can not lie. If this three hundred miles of solid earth had been

THE CHASM.

torn apart by volcanic forces, the strata would not now be horizontal, and continuous from side to side in the bed of the chasm, but contorted or bent upward. Had one part settled away from the other, leaving a gap between, the strata would not be at equal heights. The river is the only agent that could have done the mighty work. At some period of past time incalculably distant, the Colorado and its tributaries flowed over a mile above on the mesa, and descended by a cascade into a great lake which filled the valley between the Great and Black cañons. A succession of such lakes, connected by cataracts or rapids as before described, led over the mountain chains, until step by step it reached the valley through which it now flows to the Gulf of California.

Newberry found, in the deposits of the lower part of the river, the tooth of a mastodon and the silicified remains of fossil drift-wood buried in the ancient banks now some two hundred feet above the present level. These remains indicate a far more abundant vegetation than at present, and that when the lakes spread their broad sheets over the now barren valleys, and the rivers were near the surface of the mesa, all the land was covered by great forests of pine, among which huge elephants roamed and cropped the succulent leaves. Time has sapped this green, luxuriant youthfulness, and in its seared and wrinkled old age, though grander and more majestic, the country is bald and unfruitful.—*American Naturalist.*

THE PARTING HOUR.

THE following exquisite poem was written by the late Edward Pollock, the gifted California poet, on the 6th of January, 1857, and has never before been published. It was given by the poet to a friend who was about to depart on a steamer for Oregon, Pollock saying: "Take this. You may, perhaps, read and appreciate the sentiment long after I have ceased to be among the living":—

There's something in the "parting hour"
  Will chill the warmest heart—
Yet kindred, comrades, lovers, friends,
  Are fated all to part;
But this I've seen—and many a pang
  Has pressed it on my mind—
The one who goes is happier
  Than those he leaves behind.

No matter what the journey be,
  Adventurous, dangerous, far,
To the wild deep or bleak frontier,
  To solitude, or war—
Still something cheers the heart that *dares*
  In all of human kind,
And they who go are happier
  Than those they leave behind.

The bride goes to the bridegroom's home
  With doubtings and with tears,
But does not Hope her rainbow spread
  Across her cloudy fears?
Alas! the mother who remains,
  What comfort can she find
But this—the gone is happier
  Than one she leaves behind?

Have you a friend—a comrade dear?
  An old and valued friend?
Be sure your term of sweet concourse
  At length will have an end!
And when you part—as part you will—
  Oh, take it not unkind
If he who goes is happier
  Than you he leaves behind!

God wills it so—and so it is:
  The pilgrims on their way,
Though worn and weak, more cheerful are
  Than all the rest who stay.

And when, at last, poor Man subdued,
Lies down to death resigned,
May he not still be happier far
Than those he leaves behind?

S. F. Californian.

DIFFERENCE IN TIME BETWEEN OLD AND NEW STYLES.

IN view of the extensive commercial relations which will probably soon spring up between San Francisco and the Russian ports on the Pacific (where the Old Style is used), it is desirable that so important a matter as *corresponding dates* should be perfectly understood by our business men. And since no one else has called attention to it, I will do so myself, and endeavor to fully explain it by generally reviewing the subject of the calendar.

The exact period of a year, or the revolution of the earth around the sun, is three hundred and sixty-five days, five hours, forty-eight minutes and fifty-one seconds. The ancient Egyptians used three hundred and sixty-five days for their years and were the nearest correct; the Romans (from whom our calendar is derived) used thirteen lunar months, or three hundred and fifty-five days. This threw the seasons into great confusion, but was rectified by Julius Cæsar in the year 45 B. C., which he ordered to commence on the 1st January, being the day of the new moon immediately following the winter solstice of the year before. He also enacted that the succeeding year, 46 B. C., should consist of four hundred and forty-five days, and thereafter that one bissextile or leap year, should be inserted after every three common years by making February to consist of twenty-nine instead of twenty-eight days. This period, however, was too great by eleven minutes and nine seconds in each year, amounting to more than ten days in 1582, when Pope Gregory XIII. decreed that the year should be brought forward ten days by reckoning the 5th of October

the 15th, and to insure accuracy thereafter, prescribed the rule that: Every year whose number is not divisible by four, without a remainder, to consist of three hundred and sixty-five days; every year which is so divisible, but is not divisible by one hundred, of three hundred and sixty-six; every year divisible by one hundred, but not by four hundred, again, of three hundred and sixty-five; and every year divisible by four hundred, of three hundred and sixty-six.

This calendar was adopted immediately in all the Catholic States of Europe, but was not introduced into England until the year 1752, when by act of Parliament eleven days were suppressed (the error having increased one day), and the 3d of September was called the 14th. By the same act, the beginning of the year was changed from March 25th to January 1st.

Since that period the error has increased another day, and consequently the difference in dates between ourselves and the Russians is now twelve days, and after February 29, 1900, will be thirteen days.—THOS. TENNENT, in *S. F. Bulletin.*

THE ZODIACAL LIGHT AS SEEN IN CALIFORNIA.

THIS beautiful and wonderful atmospheric body or phenomenon, for its nature is yet but little understood, is exhibited in no country in such clear and perceptible outlines as in California. For the last six months, particularly from the 1st November, 1863, to February, 1864, from the exceeding clearness and tranquillity of the evenings, it shows itself before the declining sun, especially near the sea-shore, in all its singular and lovely proportions, and continues to be visible till even midnight, if no clouds are in the way. When the sun is setting, it may be seen in soft light orange-colored rays reaching many degrees upward, and many people take it for the rays of that orb when in its daily decline. After dark, it resolves its appear-

ance into a long luminous track of an elongated triangular figure, reaching nearly up to the central parts of the heavens, culminating not far from the zenith, and appearing like the subdued light of the tail of a distant comet—such as the immense affair seen in California three or four years ago. In the great interior plains of the country, and we suppose equally so in Washoe, Utah, and Arizona, its appearance, from the refraction of the rays of the heated surface, is equaled, if not probably much exceeded, by its show near the ocean line. It lies nearly in the sun's ecliptic, its base being on the horizon, and the apex at all degrees of altitudes. In the evening, it may be seen over the track of the setting sun, a little north of west, and in the morning, about dawn, a little south of east. It is supposed by some to be a cosmical body near to the earth's atmosphere, of most ethereal and attenuated nature, similar to the tail of comets, as the stars appear through it, and slightly resemble the nebulæ of the milky way. Its nature has never been examined in California, where, however, it could be done just now, and till April, with great facility.—*S. F. Bulletin*, February, 1864.

THE FILIAL FEELING.

I AM wedded, Coleridge, to the fortunes of my sister and my poor old father. Oh, my friend, I think sometimes could I recall the days that were passed, which among them should I choose? Not those merrier days, not the pleasant days of hope, not those wandering with a fair-haired maid, which I have so often and so feelingly regretted —but the days, Coleridge, of a mother's fondness for her school-boy. What would I give to call her back to earth for one day, that I might, on my knees, ask her pardon for all those little asperities of temper which from time to time have given her gentle pain! And the day, my friend, I trust, may come, when there will be time enough for kind offices

of love, if Heaven's eternal years be ours. Oh, my friend, cultivate the filial feeling! Let no man think himself released from the kind charities of relationship! These are the best foundations of every species of benevolence.

CHARLES LAMB.

AN INCIDENT IN THE LIFE OF A MINER.

IT was a gloomy afternoon in the middle of the rainy season so peculiar to the climate of California, that myself and two companions came to a halt, after a long and fruitless search after that precious metal which has drawn so many away from their peaceful homes to become wanderers in a far-off country.

Mine was only one of the numerous instances of hard fortune which seemed to merge into a fatality, and to make abortive every effort toward acquiring a fortune, or even a competency. My companions were young men, brothers, who had left the States with their heads filled with golden dreams, and, after two years of unparalleled hardship, found themselves in a frame of mind bordering upon desperation, and utterly destitute of money and the common necessaries of life

We had entered a small valley in the morning, formed by the range of hills near the North Fork of the American River. It took us nearly the whole of the forenoon to descend the precipitous sides of the mountain, and, exhausted by our exertions, we had thrown ourselves under the outspreading branches of a large oak, which stood near the center of a small level which formed the basin of what appeared, at some distant period, to have been the reservoir of a small lake. I had lighted my pipe, while my friends were engaged in unpacking such scanty provisions as we had remaining. My thoughts had insensibly wandered away to old associations, and I was half-wondering to myself whether I would ever "strike a pile"—the ultimatum

which is ever present to a Californian's imagination—when I was startled by a shout behind me. I turned quickly, and found the brothers dancing and leaping about in the most extravagant manner. I rushed up to them, and there, in glittering profusion, lay the cause of their sudden joy: they had rolled a large stone over to serve as a seat, and in doing so exposed to view a "pocket" filled with masses and lumps of gold in nearly a pure state. I congratulated them on their discovery, when each claimed it as his own. The lie and the blow were passed in quick succession, and before I could utter a word they were in mortal combat, rolling over the sward and shifting their positions with the rapidity of lightning. They were mad—the froth flew from between their closely-shut teeth, and they gave utterance to howls of rage that resembled more the shrieks of demons than human beings. In an instant one jumped up with a yell of victory, grasping a knife dripping with the blood of his brother. He threw himself flat on the ground, with his face and hands on the treasure. It was with feelings better imagined than described that I witnessed this terrible tragedy. Every thing had passed so instantaneously that I had no opportunity for interference. As soon as I could collect my scattered senses, I proceeded to raise the injured one up. He was stone dead; the knife must have pierced his heart. I was in the act of laying him down when a cry reached me that will haunt me to my dying hour. I looked up, and—horror of horrors!—saw the brother half risen from the earth, in the act of casting from him a huge rattlesnake which had coiled itself around his neck while he had been hugging to his heart his ill-gotten gold. There was a dark, livid spot upon his cheek, which told the tale, while stamped upon his features, ferocity, rage, fright, and utter despair, struggled for the mastery. Above all could be heard the clear, ringing rattle of the deadly reptile, as, cast from the hand of its victim, it crawled its slow length away into the surrounding chaparral. I entered that valley a young man—I left it prematurely old. I buried both brothers under the old tree which had been the only witness, beside myself, of their early and violent death.

THE SWEET-BRIER.

My heart grows tired as I sit to-day
In the midsummer air;
So I close my eyes and think of the Past—
Of a picture there.
I see two children in search of flowers
At the foot of the hill,
Where, nestling among the fresh, sweet clover,
Their aprons they fill
With buttercups yellow and primrose buds
And daffodils gay.
Then parting the grasses and weeds—behold!
A low bending spray—
A sweet-brier bush! the stray little thing,
How *could* it grow there?
All cuddled away among the long grass
And sighing for air.
You modest, sweet darling! Come, make your debut!
You were born to be seen,
To exquisitely bloom, and lift up your head
As proud as a queen!
You're no little daisy or violet meek
To hide near the ground;
But graceful to grow, and to smilingly twine
Your pink wreaths round
Our window-shade, and over our door:
And soon we'll find
Your wantoning sweets pervade each breath
Of summer wind.
You ne'er can grow to glorious right
Thus kept from light;
But lifted to sunshine and freedom you'll thrive,
And gladden our sight!

Uprooting the bush, we carried it home,
And planted anew.
The south door soon was rose-enwreathed.
When bathed in dew

The humming-birds came—then drowsy bees,
For dainty fare.
And coquettes loved its light pink blooms
To grace their hair.
And oh, when the rain came pattering down,
In freshening shower,
Ineffably sweet was the air around
That matchless flower!
Oh, waft here now, through the visioned past,
Thou rose-scented wind!
Bring that sweet-brier's breath! Bring the grace of that time
To soothe my mind
And charm my soul from its thirsting pain!
Ah well! Ah well!
I'll think not of self—the Lord is good—
And who can tell
How many hearts like that fair flower
Are smothered from light!
And tender care, and kept below
Their proper right,
Which, if translated to kinder thoughts
And sunnier spot,
Would rise to noble heights, of which
They now dream not;
And sweeten lives and gladden hearts,
And lighten care,
Till gathered with the flowers of God they bloom
In pastures fair!

MARY VIOLA TINGLEY.

San Francisco, August, 1867.

THE CHINA MAIL BANQUET.

Remarks of MESSRS. ELDRIDGE, MCALLISTER, STANFORD, STONE, *and* STEBBINS, *at the great China Mail Banquet, San Francisco,* Dec. 31, 1866.

REMARKS OF CAPTAIN ELDRIDGE.

OURTH regular toast.—"*The Pacific Mail Steamship Company*:—The Avant Couriers of Progress, and Common Carriers of Civilization —we praise the bridge that has carried us safely over." Captain Oliver Eldridge, agent in San Francisco, of the Pacific Mail Steamship Company, responded as follows:—

In reference to the sentiment just proposed and received so cordially, I beg to convey my thanks to his Excellency, the Governor of California, and the distinguished gentlemen present, for and in behalf of Allen McLane, Esq., who has so nobly filled the position as President of the Company of which I am but an humble representative on this coast. I sincerely wish that not only he, but the Vice-President, Mr. Bellows, and the gentlemen who compose the Board of Directors were here with you in person, as I feel they are in spirit and feelings.

His Excellency will appreciate my feelings, when I state that there is no duty which a merchant sailor performs so reluctantly as when called upon to make a speech, and I am sure the gentlemen present will thank me for not occupying their time, particularly when I see so many around me ready to overflow with eloquence.

Like all intelligent corporations, the P. M. S. S. Company has provided for the incompetency of its officers when away from under the wing of its President, and when surrounded by embarrassment they immediately consult the advice of a friend. I shall not depart from that rule on this occasion, but proceed to consult one more familiar with public speaking than myself—Mr. McAllister.

REMARKS OF HALL M'ALLISTER, ESQ.

Hall McAllister, Esq., arose and said:—

I respond with pleasure, Mr. Chairman, to the request of my friend, Captain Eldridge. He disclaims any power of elocution, but I beg to inform him, in this public presence, that he is endowed with the best and highest strain of eloquence—not of the mere voice, but of the heart, of the life, of the character and of the conduct.

> "For conduct hath the loudest tongue;
> In the deed, the unequivocal, authentic deed,
> We find the best argument."

Or, as has been pithily said, "Words are Women, but *Deeds*, those be men.

Mr. Chairman: On March 3, 1847, Congress authorized the Secretary of the Navy to contract for the transportation of a monthly mail from Panama to Oregon in steam vessels. This led to a mail contract, which finally became the property of Wm. H. Aspinwall and his associates. These gentlemen, headed by Mr. Aspinwall (who was the founder of the Pacific Mail Steamship Company), organized that corporation on the 12th of April, 1848, and built three steamers well known to our pioneers, the *California*, *Oregon*, and *Panama*, vessels of about one thousand tons each.

The Pacific Mail Steamship Company of those days bore no comparison with the Pacific Mail Steamship Company of the present time; then they were "but in the gristle, but now they have hardened into the bone of manhood."

Then their capital was $500,000, with the liberty, by their charter, of increasing it to $1,000,000; now it is $20,000,000; then they had three steamers, of one thousand tons, on the Pacific; now they control the California trade on both oceans—have some twenty steamers, most of them over 2,500, and some of them 5,000 tons burden. This is a great change, a wonderful growth, a magnificent result.

This great "body of performance," the present efficient organization of this company, the skillful administration of

its affairs for years past; its present power and prestige, and the initiation of the great enterprise which we now celebrate, are largely due to the executive ability, the sagacious judgment, and the prescient forecast of its President, Allen McLane, of New York, son of that Louis McLane who, as Secretary of State, as Secretary of the Treasury, as Minister to England, as President of the Baltimore and Ohio Railroad Company, evinced high and various talents.

The son has proven himself a worthy descendant of such a father; he has not only shown himself a chip of the old block, but, as Burke said of the younger Pitt, "*not merely a chip of the old block, but the old block itself.*"

In making this great attempt at trans-Pacific steam navigation, the Pacific Mail Steamship Company have received but inconsiderable aid at the hands of the Government. Their contract (authorized by the Act of February 17, 1865) binds them, for an annual subsidy of $500,000, to a mail service of ten years, and monthly trips between San Francisco and Hong Kong, touching both on the outward and inward passage at Honolulu, Sandwich Islands, and Kanagawa, Japan; and this in first-class American steamships of 3,500 tons burden. As has been wisely recommended by our Chamber of Commerce, this stoppage at the Sandwich Islands, which will occasion a delay of five days on each voyage, or ten days on the round trip, should be stricken from the contract, as the main object of the enterprise is not mere communication with the Asiatic world (that we have already), but direct and speedy communication—*the most direct and the most speedy*—so that there shall be one continuous and undeviating line of steamship and railway from Asia to Europe; so that this shall be the great avenue of Eastern trade; so that San Francisco and New York shall stand as two mighty portals on either side of the continent through which this affluent traffic must pass, and at which it must pay tribute.

Despite the smallness of the Government subsidy, the Pacific Mail Steamship Company, true to itself and to its past history, have initiated the undertaking in a spirit of munificence worthy of the magnitude of the enterprise. Their steamships for this China line are to be not of 3,500 tons, as

called for by the contract, but of 5,000 tons burden, and are to cost $1,000,000 each. Of these, the *Great Republic* and the *Celestial Empire* are already launched, and four others are to be constructed of the same size and at the same cost.

When we reflect that this company propose to devote $6,000,000 to the construction of their China steamers; when we consider the cost of auxiliary vessels, of depots and wharves at the Sandwich Islands, Japan, and China; when we see them now expending in wharf and warehouse improvements in this city some $500,000, we may form some just idea of the liberal and noble manner in which this great steamship company (the greatest in the world) propose to undertake this vast enterprise. I say undertake, but I mean undertake and carry through, for their immense capital, their past energy and success, the high ability of their directors, the well tried capacity of their agents, their noble corps of captains and officers, and the general efficiency of their system of business, guarantee, that if any association or any company, of our day, can and will successfully execute this novel and notable achievement, that company is the Pacific Mail Steamship Company.

For centuries, the commerce of the East has been the object of European cupidity, and to monopolize it, mercantile ingenuity, crafty diplomacy, and military power, have been vigorously, unscrupulously and continuously, employed. Its splendors have been the theme of adventurous spirits throughout the world, and have carried the inspiration of poetry into the ordinary routine of colonial life.

The commercial connection between Europe and the East, founded in force and fraud, has been preserved by artificial means. It requires but a glance at the map to prove that the west coast of the United States presents to the Orient a front similar to that presented by the east coast of the United States to Europe; and, if the plain suggestions of nature were followed, commercial relations between China and the Pacific States would be as extensive and various as those between the Atlantic States and Great Britain.

The proposed diversion of trade, if successful, must place

the United States "in the track of nations," and will give to California the commercial prominence to which, by her geographical position, she is justly entitled. San Francisco may not, indeed, become, as one writer has said, "*the* center of the world's exchanges," but she will assuredly reach the dignity of *one* of the financial centers of the globe.

The *political* benefits to be derived from steam communication between California, Japan, and China, are worthy of serious attention. It is well known that the desire for naval supremacy, stimulated by the competitive commercial spirit of the age, has impelled Great Britain, France, and other nations to extraordinary exertions to secure a preponderating influence in countries with which they have commercial intercourse, as also to acquire such naval stations as, in case of war, would enable them to command the seas. It is evident, however, that when the United States becomes the channel of communication between Europe and the East; when an extensive and diversified commerce shall spring up between California and the rich countries on the western border of the North Pacific; when American steamships regularly visit the most important points in that great ocean, and our civilization pours its steady light into the gloom of those dense populations, the current of influence will change, and our country will then acquire and hold the position and power to which she is legitimately entitled.

We are hopeful of this enterprise, for the record of our past gives an abiding confidence as to our future. We see the variety of our discoveries, the progress of our manufactures, the triumphs of our arts, the achievements of our science, the magnitude of our internal improvements, the wonderful increase of our numbers, the expansion of our settlements from ocean to ocean, the ponderous gates of the Rocky Mountains flung open to be closed no more. These proofs of the past stand as pledges for the future.

Pausing at this great incident in the progress of the nation, lifted up, as it were, upon the vantage-ground of "what is and what is past, we may catch some revelation" of the brightness and glory of that which is to come.

"For I dipt into the future, far as human eye could see,
Saw the vision of the world, and all the wonder that would be;
Saw the heavens fill with commerce, argosies of magic sails,
Pilots of the purple twilight, dropping down with costly bales."

But, Mr. Chairman, in this great work, the Pacific Mail Steamship Company must look to the earnest co-operation of the commercial men of New York and San Francisco. Their operations, their traffic, their exchanges, their energy and their success have constituted essential elements of the past prosperity of this company. And so it must in the future.

All the Pacific Mail Steamship company can do is to furnish facilities for the business of our mercantile community; they can not, gentlemen, originate or conduct your operations. You, our merchants, our bankers, our business men, are to enter into honorable competition for this opulent traffic. You are to strike out new paths, to infuse new ideas, to create new markets for American produce and American manufactures, and to teach the Asiatic world that we, too, are of that great dominant race, the Anglo-Saxon; that Anglo-Saxon ability, vigor, and enterprise, and even Anglo-Saxon aggression, finds with us its best and highest development; that Providence has placed its mighty right hand upon our head, and says to the first born, as did the Patriarch Jacob: "He also shall become a people, and he also shall be great; but truly, his younger brother shall be greater than he, and *his seed* shall become a multitude of nations."

I may be permitted, Mr. Chairman, to envy the feelings of the American resident, as, gazing from the lofty cliffs of Hong Kong, his eyes are greeted with the sight of the steamship *Colorado*, that noble embodiment of native skill and native genius, coming from this advance outpost of American civilization. As he shall see her swing round to her anchor in that foreign bay, he will mark her lofty decks rising above the surrounding shipping, he will admire her fine proportions, her graceful lines, her buoyant fabric, her sturdy strength, her unblenched majesty; but he shall see, ay, and feel, something more than the presence of a splendid ship,

putting forth all her beauty and her bravery—something more, and something better. He shall see our glorious flag streaming to the wind; he shall feel "something of America herself before him, a fragment of the great country of his birth; that in that floating structure, America is represented; that American hearts and American blood animate that inert mass; that by these, and such as these, covering every sea, and resting in every roadstead, that we are known to the world as a great and growing people,—that by their power and their might we are able to demand reparation and command respect; so that, with the safeguard, "*I am an American citizen*," we carry a perpetual protection as potent as that which caused the Jewish ruler to stay his hand upon hearing the notable warning: "*Take heed what thou doest, for this man (Paul) is a Roman citizen.*"

REMARKS OF EX-GOVERNOR STANFORD.

Fifth regular toast.—"*The Pacific Railroad:*—The ligament that binds the Eastern 'Eng' and Western 'Chang' together." Ex-Govenor Stanford replied to this toast in the following language:—

Mr. Chairman: To one who cares to look into the future, this banquet, in honor and in celebration of a line of steamers between America and Asia, must prove a source of interest. It shows the importance of the result is appreciated. The command of the carrying trade is a control of one of the essentials of commerce. To give this command, two things are of chief importance. One is superior cheapness, the other superior expedition of transportation. It can hardly be expected at this time, that the line of steamers whose inauguration we celebrate, shall have the advantage of cheapness, but it will have that of superior expedition, and it is upon this advantage it must chiefly rely for success. It is for this the steamship company must strive; and, Mr. Chairman, it seems to me, to do that, their course should be as direct as possible. But enough of this, it is but a hint that I wish to give, and perhaps I intrude. But I do not forget that the Government has given aid for a purpose, and I wish

to see that purpose accomplished. This is an effort to open up and secure largely the commerce of a people more numerous than the people of all Europe and America; a people whose civilization was old when that of Europe began, and who have maintained it to this day. They are an agricultural, manufacturing, and commercial people, wise in government, arts, and science.

The prize we struggle for, is the commerce of such a people.

As an auxiliary to that end, the Pacific Railroad will play no inconsiderable part. Indeed, upon another occasion, I might be tempted to say it would perform the chief part. The Pacific Railroad will ever be a monument to the enterprise and sagacity of the American people.

Though long considered by them, they fully awoke to its importance, and determined it should be built, while in the midst of the most gigantic civil war ever known.

It was on July the 1st, 1862, that the voice of the people, in favor of a Pacific Railroad expressed a law to that effect, and limited their appropriation in aid thereof only by a $100,000,000, besides 12,800 acres of land to the mile. Truly a noble donation to secure a nobler end—the binding the East and West by ties, not only fraternal, but by the enduring ones of an overwhelming interest. In the passage of the Pacific Railroad law, it may not be improper to say, the Central Pacific Railroad Company of California played no inconsiderable part. It urged its passage at that time and in that form. The Central Pacific Railroad Company has asked for much, but it has never asked in vain. All that it has ever asked, whether at the hands of the nation, of the State, or otherwise, it has received, but it has never asked any thing that it could not, and did not, make plain was right and just and necessary to the construction of the Pacific Railroad.

After a line of railroad has been selected and its practicability determined, the chief problem then to be solved is a financial one. It was in that our company found its chief difficulty, and while it remained unsolved, the physical difficulties—as it was known they would yield to the

power of capital and labor—were of minor importance, and gave the company no uneasiness. But they were truly of a formidable character. The financial problem has been solved; its result is success. The physical one is in a fair fair way for solution. Already the locomotive sounds its bell and blows its whistle at an elevation of 5,911 feet in triumph over the maximum grade and the snows of the Sierra Nevada. Experience has already demonstrated that the provision made to encounter snow is amply sufficient, and that snow can not stop the locomotive if vigorously and properly met.

Another year and the track of the Central Pacific Railroad will be east of the Sierra Nevadas upon the plains beyond, and progressing at the rate of a mile a day toward connection with the Union Pacific and completion of the Pacific Railroad in the year 1870.

Then will the "ligament be perfect that binds the Eastern Eng and Western Chang together." Then, Mr. Chairman, behold the result! For America, the chief control of the developed trade of the better part of Asia with Europe and America. Our Pacific slope, and particularly California, filling rapidly with a hardy, enterprising, and industrious people, mostly of our brethren and sisters of our old Atlantic homes—California will then commence a career of prosperity hitherto unexampled; and here on the Bay of San Francisco will be the great commercial center for this prosperous people; here will the commerce of the Pacific find its entrepot, and here will be one of the great cities of the world, and we, fellow-citizens, may all aid in realization of the vision.

REMARKS OF REV. A. L. STONE.

Seventh regular toast.—"*The influence of Commerce on Literature and the Arts:* 'Through the aid of Letters, Venetian galleys became Venetian galleries.'" Rev. Dr. A. L. Stone responded as follows:—

Mr. President: The old year goes down to-night upon the old past, and a new year will rise to-morrow upon a new

future. If the event which occasions our evening festival were only a piece of money-making speculation, like an expedition to some island of the sea to dig up Captain Kidd's treasure, we might, perhaps, as many of us as hoped to touch the profits, put our heads together to look after our stock and to calculate the chances of our venture. But no such scheme would draw together in festive congratulation an assembly like this; no such thought would be worthy to occupy our minds during these last hours of the dying year; no such venture, however it might succeed, would have power to inaugurate with the dawn of the incoming year a brighter future for America and humanity.

The real character of the event which makes our jubilee to-night, has been well set forth in the just and eloquent remarks to which we have already listened. And the sentiment now offered and receiving its response by acclamation, celebrates this event as having grand connections with the growth of literature and the progress of the arts.

The first condition of growth in literature is mental activity. Literature is written thought; but there must be minds to think before there are pens to write or types to print. Let a night of dark ages come down upon the race, and in that long brooding torpor the intellect sleeps and letters are silent. Waken the mind, rouse the intellect to a morning activity, and thought begins to be produced. Thought kindles and quickens thought, stimulates inquiry, calls forth high debate, is wedded to its fellow-thoughts in systems of truth, and Philosophy is born; conquers the secrets and codifies the laws of nature, and Science is cradled; gathers the records of the times and of past ages, and History begins its stately marches; stretches forth with free wing along the heights of imagination, and Poetry takes her lyre; summons the masses to reason and action, and Oratory wields its logic and pours forth its burning passion.

And nothing has such power to awaken mind, to shatter the chains of its slumber and startle it into rising energy, as great events. They are thunderbolts reverberating along the sky! They are earthquakes rocking the Continent! Who can sleep?

This is one bond of connection by which this new stride of commerce from our western shores to yonder distant Orient touches also all the fair realm of literature. It is a great awakening event! It opens drowsy men's eyelids; it makes men think; it makes men feel; it is itself a full-statured thought, leaping forth into the world of mind like Minerva, giver and goddess of wisdom, from the head of Jove.

But such commerce is an explorer. Its written explorations are literature. It is a student of geography. The records of such study and research are literature. It questions the products of divers climes and the order of elemental laws. It compares man with man, in his native original, his social state, his governments, his religions, and his systems of education; and these questions and their answers make a copious and living literature. It bears abroad, and it brings home, the type of comparative civilizations, in their chief expressions—the coarser and ruder, and the more consummate and refined—and thus stimulates invention, and bears back and forth the keys to the laboratories of all the arts.

Tell us how our Oriental neighbors live, how they build, how they clothe themselves, how they fashion the tools of all craftsmanship, how they cultivate the ground and its various growths, how they decorate the halls of public and private wealth, and we shall find that we have something to learn, and American art will start forth on new achievements. Tell them the same story of society here—and this story, commerce, by its interchanges, is always repeating—and they will find that they can learn of us; and the riches of the two civilizations in all that relates both to thought and art, will become the heritage of both—a literature and an art for one-third of the human race!

Mr. President, this subject is, of course, too broad for a full discussion in the hurry of these flying festal moments. These hints must suffice.

But does any man doubt that this event, which drives the shuttle of commerce back and forth across the breadth of this great Pacific Sea, weaving a bond for the union of the

hemispheres, is such a wakening and fruitful event as has now been suggested? Why, if any of us can sleep under an influence so rousing, he would sleep through the scenes of the Last Day.

Give us this new breadth and expansion for our American enterprise and our American civilization, and the intellect of this land, in all that it knows and dreams and produces, will have such a new heritage of wealth and power as has never fallen before by any single bequest to the lot of any people. Shut up a nation to itself, as by some old Tartar wall that keeps out every alien footstep and keeps itself at home in perpetual isolation, and the mind is stifled and dwarfed, and all its progeny declines. Why, sir, the very Emperor that built that famous old wall ordered the destruction of the whole body of Chinese literature, that Chinese history might begin with his own dynasty. Throw down all walls of exclusion between nation and nation, and the rejoicing intellect, following the prow of world-wide commerce, will range all lands and peoples, and build its hives of honeyed sweets from the flowering of every clime!

And over this bridal hour of the Orient and the Occident, thus made one by the golden chain of commerce, we may well breathe, in the name of literature and art, and the whole of a Christian civilization, this ancient nuptial blessing: "What God hath joined together, let no man put asunder!"

REMARKS OF THE REV. MR. STEBBINS.

Eighth regular toast.—"*Commerce:* The Ally of Religion and Civilization." Responded to by Rev. Horatio Stebbins, who said:—

Ladies and Gentlemen: I wish to acknowledge with grateful appreciation the honor you have conferred upon me, in giving me the opportunity to be present on this occasion, and to join in the festivities appropriate to the inauguration of this great maritime enterprise. I am sure, sir, that as I look over this company and congratulate myself on the enjoyment of your hospitality, I but reiterate the sentiment

of every man here when I express the pleasure I feel in meeting some of the merchants of China in company, and in mutual interchange of good-will, with the merchants of San Francisco. May that interchange never cease, so long as value seeks equilibrium on the earth, or the wind of popular liberty rushes to fill the vacuum of despotism.

I know you will join me, gentlemen, when I congratulate myself and you at the presence of our distinguished fellow-citizen, the personification of American commerce from New York. There is a singular fitness and propriety in his going out in this ship informed by fire to fulfil the dream of Columbus in a way he never dreamed, and finding the Orient by the Occidental passage. May an Almighty Providence of goodness protect him and his family; and when he has made the circuit of the earth, and explored the habitations of mankind, may he sit down at his own fireside, and move again in the large circle of influence to which he belongs.

We, in California, owe much to the Pacific Mail Steamship Company. That company is a fine illustration of the energy and foresight of American citizens. To call it a monopoly is idle and unintelligent. The Company is successful in the open competition of the world; and success always and everywhere implies a certain degree of exclusion. Whatever I do, and do better than anybody else can, men being the judge, nobody can get away from me. And in that line all there is will flow to me. If I can saw wood better than anybody else, and can saw all there is, no other saw-buck can stand beside me. Just to the extent to which any business is limited by natural laws, it is exposed to the exclusiveness of success. But a great and successful company in a country like ours, can not, in the long run, be oppressive or unjust. Its normal law is rectitude, honor, and fair play. Any company or corporation is doomed that forgets that there are two parties in all transactions, that the public is its customer, and if not on the whole suited, will find somewhere else to go. That stands to reason, and it stands to common sense.

The Pacific Mail Company has arisen just as California

has arisen: just as the American people have taken this country and reduced it to order and civilization. It is the commercial spirit rising parallel with the life of a new country. And that, gentlemen, is the promise of the future greatness of the country. Every great civilization must have commerce, because it must be in relation with the world of mankind. It is common to speak of the American people as a progressive people. Now, I do not wish to indulge any extravagant sentiments or screaming rhetoric. We American people are a common sort of people, born of respectable parents, and enjoyed in our childhood the benefits of the common-school. We do not trace our lineage to aristocratic blood. Most of us, if we go back two generations, run against the plow handles or a shoemaker's bench. Our grandmothers knit stockings, mended mittens, and made themselves useful in the frugal administration of affairs. But we have come here just as we were, graduates of town meetings, with little learning of the schools; and I affirm, not in frivolous, not in weak exultation, but with profound reverence for the Almighty Providence of human lot, that we have displayed an instinct of social order without a parallel, all things considered, on the face of the earth. Why, Governor, you came here when this city was a desert, under contract at fair wages per month, and, thank God, and honor to you, you kept your contract! (Let no man say I have California on the brain, for I have not; but I have a profound faith in mankind in my heart.)

Now, commerce is the firm ally of this social order which we have established here, and stands in strong support over against the provincial tendencies of agriculture and mining. It puts us in relation with the world, and supplements the partial and narrow views of men. It universalizes our conceptions of history, of men and nations. When in the former geologic eras the Almighty shook terribly the earth and opened yonder gate of gold, he signified the conservation of a nationality, humane and world-wide. And the magnificent ship, one of the noblest in the steam marine of the world—she partakes of the universality of the spirit of commerce; and as we look at her, she rises in splendor of idea

above all provincialism of thought or feeling—the bride of the world-wide sea. She is no more the Pacific Company's ship. She is not a California ship, but she is an American ship! She carries America! And let her commander's breast swell with pride, and his eyes fill with tears of joy, as she trembles beneath his feet in sympathy with the larger thought! (Gentlemen, I give you the health of Captain Bradbury, the accomplished gentleman, the enthusiastic and skillful navigator.)

But commerce is not only the ally of civilization by force of cosmopolitan character and idea; she is the ally of religion also, by bringing men together on the basis of what is common to all. What men need is to know, and understand, and appreciate one another. The barriers of language, religion, manners, are to be overcome by mild persuasion of mutual interests and good will. To this end, international law, which is for the regulation of commercial intercourse, is a kind of gospel of common sense, done into justice and right. For this reason, commerce carries religion where a missionary could not go. If it be said that the wrongs perpetrated in the name of commerce forbid such a view, I reply that the wrongs perpetrated in the name of religion are as great. We must judge things by their real quality, not by their accidents. One of the ablest American travelers I have met told me that an American man-of-war, lying in the harbor of Beyrout, would be worth more in moral impression than all the missionaries. Sir, religion is that sentiment in the human breast, universally diffused wherever man is found, which lifts up the mind to commune with the Almighty Maker of the universe, and finds his signature written most distinctly upon the frame of man himself. And whatever the intercourse of nations or peoples—if established in the instincts of man's moral nature, if it has a place anywhere in the eternal kingdom of right, if it appeals to man as man, free, intelligent, accountable—it brings him into the region of universal moral conceptions, whose splendor and truth are the cosmopolitan glory of the City of God.

DISUNION.

THERE's a sound on the wind, there's a shrill, chilling cry
Going past on the blast, through the comfortless sky;
In the night is a wailing, that keenly hath clove
Through my heart, like the pain of an unhappy love;
And the Nation, in slumbers she will not resign,
Is vexed and disturbed by a sound and a sign;
And sobs in her sleep, as the warnings go past,
"There is danger—and discord—and *death* on the blast."

And whence comes the wind? and what causes the pain?
And wherefore this whisper from Texas to Maine?
And why, in the fullness and depth of her rest,
Should the heart of our Mother in dreams be distressed?
Potomac's blue waters are clear as the skies,
And the chiefs that sit by them are valiant and wise;
But a low, laughing fiend to their counsels has stole,
And darkens with tempest the calm of each soul.
A poison unwonted corrodes in their veins,
Wild frenzy is racking their hearts and their brains;
And the demon still hisses, in whispers of fear,
"DISUNION! DISUNION!" in each maddened ear:
And this is the reason that pain and dismay
Glide like ghosts through the night, and make pallid the day;
And from thence are the sighs and the sounds that have made,
For her children, the heart of our Mother afraid.

Is it so? can it be? are they prophets who say
That night shall return on the dawn of our day?
Shall the despots whose hootings ring sharp in our ears,
Exult in our downfall—rejoice in our tears?
Was it all but a dream, the bright vision that came
To the camps of our fathers, through battle and flame?
Did she whisper in vain, in each ear as she passed,
"There's a temple found here for Jehovah at last!
On this fresh land of God ye shall worship and dwell,
And the sound of your joy shall be tyranny's knell;
Pass on through the fire—by your trials made strong,
Leave not on your borders one foot-print of wrong.

Be as one, and cling close, like the drops in the wave,
Strike firm, and fear not—a free home or the grave!"
Oh, woe to the land where these words are forgot!
Alas! for the nation where union is not!
Mourn, mourn, and lament for the ill-fated shore,
The dust of whose martyrs is holy no more!

Ye millions who toil in the South or the North—
Ye with arms strong as iron, and hearts of true worth,
Wipe the sweat from your brows, look aloft and behold,
On the sweeping west wind there's a banner unrolled;
Not an inch of that flag but was purchased by strife,
Not a thread in its woof but was won by a life:
'Tis your hope—your last hope! while it floats there shall be
A land undivided, a race that is free.
Will you—*dare* you stand idle while madmen draw near
And rend the bright banner that cost you so dear?
Speak aloud—they shall listen—for, oh, they know well
Their life is your favor, your anger their knell.
One shout for the Union! one cheer for the band
Who reared the starred flag in the night of our land,
And we'll see who shall whisper "disunion" or "strife,"
When the heart of the nation rekindles with life!

God shield thee, Green Erin! for manhood no more
Has homestead, or harvest, or hope on thy shore;
And France, like a Titan awakened by pain,
Struck only one blow, and now slumbers again.
Italia lies bleeding and Kossuth has fled,
While the band that hung round him are exiled or dead.
Here lonely we only the flag have unfurled,
In whose shadow may rest the oppressed of the world;
And woe to the foe, who by discord or war,
Would quench in our standard the beams of a star!
Though his heart be of iron, his hand made so bold
As to break the strong hand that was woven of old;
Let him heed well the sequel; our banner of blue
Has stripes for the foeman, as stars for the true,
And the sun shall not shine on the men that shall see
Dismembered or conquered the Flag of the Free.

EDWARD POLLOCK, in 1858.

THE MISSION OF THE TEACHER.

HE faithful teacher, occupying as he does, for a time, the parent's place, must feel a similar anxiety, as he looks round upon those placed under his charge. His situation is inferior in responsibility only to that of the parent. Indeed, since so many parents neglect their duty in this respect, his influence upon those who continue for any length of time under his charge, is probably not surpassed by that of any other class of men in the community. He must often seriously ask what will be the lot of those committed to his trust. Could the veil with which Heaven conceals the future be removed, should he behold this noble and ingenuous boy with heart full of aspirations after all excellence, still rising higher and higher, or would he have descended from the lofty heights of honorable renown, and become dishonored, degraded, and corrupt? This fair girl, with the light of heaven in her eye, and its purity surrounding her as with an atmosphere of holiness, would she be seen still the same in her spotlessness and innocence, or would the light be extinguished, the glory have departed, and nothing remain but the wreck of what was once so lovely and so promising?

It is related that an Eastern prince once offered a prize to be given to the most beautiful boy in all his dominions. Many were presented for the premium, but it was bestowed, by acclamation, upon one for his transcendent and angelic loveliness. So beautiful a boy had never been seen upon the earth before. Some years after, the same prince again offered a prize—but this time it was for the ugliest man to be found in all his possessions. Diligent search was made; many exhibited themselves to view, of all kinds and degrees of ugliness, but among them it was difficult to make a choice, until one day there was brought into the royal presence a being, if he could be called man, so hideous, so loath-

some, so bestial, that the people shuddered while they gazed upon him. Sin had stamped its polluting mark upon every feature; from every wrinkle in that horrible face stared out a vice. Upon inquiry, it was ascertained that this frightful and disgusting wretch had been the attractive and lovely boy. A life of intemperance, sensuality, and iniquity, had made the awful change. God save our pupils from any and all the causes tending to produce so terrible an alteration.

In view of the great responsibility pressing upon every teacher to do all in his power to train up his pupils to a life of virtue and excellence, I invite your attention to some remarks upon the importance of moral instruction. I have a fear that some few teachers (I know they must be very few) may think their duty done, if they preserve good order in the school, and give instruction to their scholars in the course of study prescribed. But no teacher who has an adequate sense of the responsibilities devolving upon him, can entertain this opinion. His duty is not performed by merely cultivating the intellect. He must also educate the heart. No parent would consider any teacher fit for his post, who not only did not check even the slightest infringement of morality, but who did not endeavor to elevate his whole school to a high standard of moral excellence. To think otherwise is a great mistake. And the popular notion of education falls in with and confirms this mistake. Talk about giving a young man the advantages of education, and the thoughts immediately run on what is taught in schools and colleges. Speak of giving a young lady a finished education, and almost every one wishes to have the seminary pointed out where she can accomplish, in the shortest space of time, botany, French and Italian, music and drawing, besides a few of the ordinary branches. As if what is taught in schools and seminaries were able, of itself, to make one either great, or good, or happy.

PROF. GEO. W. MINNS.

REMINISCENCES OF COMMODORE STOCKTON.

HE gallant little "sailor-general," who filled so conspicuous a place in the early history of your State, has gone to his rest. He died quite suddenly, four days ago, at his home in Princeton, his disease being, it is said, cholera morbus. The overland mail will have given you such particulars as the public may desire to know, and a choice of obituary notices. Such of the latter as I have seen give all the fame of the conquest of California to the departed commodore. Poor Sloat, who so cleverly blinded the eyes of the British Admiral on the lower coast and reached Monterey ahead of him, hoisting his country's flag, and thereby preventing California from falling into the hands of John Bull; and Fremont, who helped to organize the revolution which terminated in the joint movement by sea and land against the Mexican authorities, and finally drove them out of the country—both these men are passed over in silence, and Stockton is lauded as the conqueror of California. Well, this is the way the muse of history does her work in these days. I don't know that I have any quarrel with her, however. Stockton certainly deserves well at the hands of the future historian of your coast. His indomitable pluck and self-will, joined to his insatiable thirst for popularity, hastened the progress of political events, and brought California conspicuously before the nation as the first fruits of the war with Mexico. Stockton arrived on the coast in the month of July, 1846. The old frigate *Congress*, burned in Hampton Roads by the rebel *Merrimac*, was his flag-ship. I remember his arrival and reception by the citizens of Yerba Buena. It was a gala day in the little old-fashioned half-Mexican town, and in honor of his coming the first printing press introduced there was set up, and the order of exercises at the fête printed on blue satin. Frank Ward, (formerly of Ward & Smith,) was Marshal of the day, and W. H. Russell (subsequently Fremont's Secretary of State, and latterly of

the firm of Russell, Majors & Co., St. Louis), was orator, clad in broadcloth and "moccasins." The commodore landed at the foot of Washington Street, and was received by the orator and committee at the junction of Montgomery Street. "We receive you, commodore, at high-water mark," were the first welcoming words of Russell (the place has considerably changed since then). Stockton (the sailors, who loved him dearly, always called him "Fighting Bob") replied in a grandiloquent speech. Alluding to the breaking out anew of the insurrection in the South, of which he had just received tidings, Stockton declared that if one hair of the head of any of the brave garrison he had left at Santa Barbara should be harmed "he would wade knee-deep in his own blood to avenge it." As Stockton was small of stature this was regarded as a tremendous sacrificial offer. Luckily, it was not required to be kept. The first editor of the *California Star* (E Pluribus Jones) during Stockton's campaign in the South, was not very complimentary in his allusions to the sailor-general. "He has been puffing and blowing around the country since his arrival," said he, "like a stranded grampus, cracking himself up as the greatest case out." Stockton crossed the Plains in June, 1847, on his return to the Eastern States, being in some haste to lay before the department his report of operations in California, and, if possible, to anticipate General Kearny's version of the facts relating to their conflict of jurisdiction and the course pursued regarding Fremont. In 1840 Stockton resigned his position in the navy, and in 1851 was elected to the United States Senate from his native State, New Jersey. The Newark *Advertiser* of this week notices the succeeding events in the life of the commodore as follows:—

"During the progress of Gen. Lee through Pennsylvania in 1863, Commodore Stockton was appointed by Governor Parker major-general in chief of the militia of New Jersey, and had the State been invaded it is well known that he was prepared to take command in person in defense of the line of the Delaware.

"Commodore Stockton was always a man of marked and decided character. His influence and control over men was

MINERS AROUND THEIR CAMP FIRE.

very great. He could not be a common man, put him where you would; and he was, above all, intensely a Jerseyman. His sudden death produces a shock throughout the State, and it will be long felt as a loss of no ordinary character."
—*New York Correspondent Sacramento Union*, Oct., 1866.

THE MINER.

THE eastern sky is blushing red,
The distant hill-tops glowing,
The river o'er its rocky bed
In idle frolics flowing;
'Tis time the pick-ax and the spade
Against the rocks were ringing,
And with ourselves, the mountain stream
A song of labor singing.

The mountain air is fresh and cold,
Unclouded skies bend o'er us;
Banks, rich in hidden dust of gold,
Lie temptingly before us.
We need no Midas' magic wand,
Nor wizard-rod divining;
The pick-ax, spade, and brawny hand
Are sorcerers in mining.

When labor closes with the day,
To simple fare returning,
We while the evening hours away
Around our camp-fires burning;
Stretched round the fading, flickering light,
We watch the stars above us,
Then bid the world and care good night,
And dream of those who love us.

JOHN SWETT.

SAN FRANCISCO TWENTY YEARS AGO.

From the *S. F. Bulletin*, April 1, 1868.

THE first newspaper printed at San Francisco was the *California Star*, a weekly journal about half or two-thirds the size of the present *Dispatch*, published by Samuel Brannan and edited first by E. P. Jones and afterward by E. C. Kemble. The first number was issued January 9th, 1847, and dated at Yerba Buena. The present name of our city did not appear at the head of the paper until March 13, 1847, when the editor published an editorial announcing that the change of name had been legally made and giving the testimony of Alcalde Washington A. Bartlett (father of the Cuban diamond-wedding bride), that the place was called San Francisco in some old Spanish papers. As a matter of fact it had been so called in a gubernatorial document as long ago as 1835.

A REMARKABLE PREDICTION.

A week before, the *Star* contained the following prediction, which is the more remarkable because at that time the gold discovery at Sutter's Mill, Coloma, had not been made:

"The town of Yerba Buena is no doubt destined to be the Liverpool or New York of the Pacific Ocean. At this point will be concentrated nearly all the commercial enterprise and capital engaged and invested in the Pacific trade. The position of the town for commerce is unrivaled, and never can be rivaled, unless some great convulsion of nature shall produce a new harbor on the Pacific coast, equaling in beauty and security our magnificent bay. Without difficulty or danger, ships of any burden can at all times enter the harbor, which is capacious enough to contain the navies of the whole world. The extensive and fertile countries watered by the Sacramento and San Joaquin rivers, and the numerous navigable creeks emptying into

the bay, must, when they are settled upon with an industrious population, as they soon will be, pour their products in this place, and receive in exchange from our merchants all their supplies of luxuries and manufactures.

"*All the products of the gold, silver, copper, iron, and quicksilver mines, with which the country abounds,* must be concentrated here for manufacture and export. In a few years our wharves and streets will present a scene of busy life, resembling those witnessed in Liverpool, New Orleans, and New York. Mechanics and artisans from all parts of the world will flock here, and we shall be in the full enjoyment of all the elegancies and luxuries of the oldest and most polished countries of the globe. This is no fancy sketch, but on the contrary, all who now read may live to see it fully verified."

PIONEER ARRIVAL AND PIONEER FAITH.

The same paper in which this remarkable prediction appeared, contained an account of the arrival, on the 6th of March, 1847, of the ship *Thomas H. Perkins*, with Col. Stevenson and part of his regiment, and of the sufferings of the Donner and other emigrants who were overtaken by winter on the summit of the Sierra Nevada. In glancing over the files of the *Star* subsequent to the above date, we are struck by the accurate knowledge it displays of the resources and capabilities of the State, and by its firm faith that California would soon enter upon a great destiny. Before the gold discovery which caused the first rush of immigration, the paper published numerous articles expatiating truthfully upon the prolific nature of the soil, admirable character of the climate, and commercial advantages of the port. The timber and fisheries of the coast were dwelt upon often. Attention was invited to the inducements for grape-growing.

THE FIRST OVERLAND EXPRESS.

The sagacity and enterprise of the *Star* were further shown by sending a special express across the plains with

letters and papers, thus anticipating the Pony Express idea of later years. In the issue for January 29, 1848, was the following notice :—

"The *California Star* Express (60 days to Independence, Mo.) will leave this place on the first of April, and New Helvetia (now Sacramento), on the 15th. Postage on letters 50 cents."

EMIGRANTS FORDING PLATTE RIVER.

A special number of the *Star* was prepared to go by this Express, giving an amount of information concerning California, that for the time was very large and accurate.

FIRST REPORT OF THE GOLD DISCOVERIES.

The issue of March 18, 1848, contained the first notice of the gold discoveries, as follows:—

"We were informed a few days since that a very valuable silver mine was situated in the vicinity of this place; and again, that its locality was known. Mines of quicksilver are being found all over the country. Gold has been discovered in the northern Sacramento districts, about forty miles above Sutter's Fort. Rich mines of copper are said to exist north of these bays."

Another item mentioned rather derisively that some silver hunters had found coal "enough to provide the proposed line of Panama steamers with fuel." The gold discovery was admitted to have caused much excitement. The white population of San Francisco at this time was thus stated: "Males (adult), 575; females (adult), 177; children (of ages proper to attend school), 60. This, as ascertained by the Board of School Trustees, in recently canvassing the town, is correct. Scarcely eight months since the total number of whites was 375. There has been over an hundred per cent. increase within this time."

A PROPHETIC VIEW OF THE PROSPECTS OF CALIFORNIA.

The issue of the *Star* for April 1, 1848—just twenty years ago—consisted of six pages, especially prepared for transmission by the "California Star Express." Six broad columns were occupied with an able article entitled "The Prospects of Calfornia," written by Dr. V. G. Fourgeaud (still a resident of San Francisco), who came to the country with his family, across the Plains, a year before, and who had just been elected one of the first school trustees of the town. The doctor's article is so correct and full as to the leading facts concerning the climate, soil, resources, minerals, lumbering, and fishing facilities of California, that it would be considered valuable at the present day. He enlarged especially upon the agricultural capacities of the State, showed how varied were its products, and predicted that the State (then a military territory) would soon be celebrated. He praises the wine already made at Los Angeles as being equal to port. He mentions the successful cultivation of oranges, olives, melons, apples, peaches, apricots, nectarines, pears, plums, cherries, almonds, quinces, mulberries, raspberries, strawberries, figs, pomegranates, grapes, cereal grains, vegetables, &c. He records the interesting fact that Captain Sutter threw a few cotton seeds in the ground at his fort, near Sacramento, and that, without attention, they produced vigorous plants, and yielded fine specimens of cotton. He relates that sugar-cane

had been successfully reared in the interior. Tobacco had also been produced "up the Sacramento," and good cigars been made from it in San Francisco. The doctor dilated upon the profits of farming, telling of one man "who arrived last year, who has already cleared $1,600 by chickens and eggs alone." He predicts that while the interior is bound to be a famous agricultural region, San Francisco is "destined ere long to become the manufacturing metropolis and the commercial emporium of Western America." He adds: "We know no other country possessing superior advantages to this in regard to manufactures. Our facilities in water-power are as numerous and as good as could be desired. It would be tedious to enumerate our prospects for raw materials of almost every description. We have already mentioned a few—flour, cotton, hemp, wool, flax, leather, &c., besides minerals of almost every description, and we are constrained to pass over many, such as silk, for instance, which we doubt not will do well in this climate." The construction of a continental railroad and an isthmus ship-canal is anticipated as certain to be accomplished. All this is set forth at much length, and accompanied by abundance of facts. The want of an industrial population is then urged, and this statement made in conclusion: "With a climate unsurpassed in its purity and excellence, with a soil as productive as could be desired, with abundant minerals of almost every variety, with the most encouraging agricultural, commercial, and manufactural prospects, California, to become what it soon will be, one of the happiest portions of the world, needs but one thing—men of industry and energy to develop its resources." This is the key-note to all the writing and talking about our State for twenty years, and much of our great progress is due to the sagacity and zeal which have gone to keeping it up in the press during that long period.

MISCELLANEOUS REMINISCENCES.

The same number of the *Star* from which the above is quoted shows that the total exports of San Francisco for the

quarter ending December 31, 1847, were $49,597.53. Of this amount $30,353 represented home products, shipped to the Sandwich Islands, Mexico, Sitka, Peru, and Tahita. The value of imports was $53,589.73, from the Atlantic States, Oregon, Chili, Sandwich Islands, Sitka, Mexico, and Bremen. A duty of twenty per cent., *ad valorem*, was then paid on all goods arriving at this port from all parts of the globe. The first Chinese emigrants, three in number, were then strangers in the town, but the *Star* said it had reliable information that a large emigration might be expected, which would be very useful, especially for silk culture. The *Star* congratulated its readers that quiet was restored to the Territory by the surrender of Castro, the last Mexican leader who held out against American authority. Colonel (afterward General) Mason, Military Governor, had issued a requisition for one thousand volunteers to garrison Mazatlan, and other Mexican ports in the South, our war with that country being yet unfinished, although rumors of peace negotiations were received and published. Captains Hastings and Hunt, and Major Hardie, were actively recruiting in the northern department, at Salt Lake, and in Oregon. "Another new silver mine," "the richest ever discovered in the Mexican Republic," had been found four miles from San José. The vein was said to be "three and one-half feet thick, having an uninterrupted run east for three miles, the depth yet unknown." None of the early silver mines of San Francisco have been worked, or realized the expectations entertained of them; but it is interesting to know that twenty years ago this then sober little village had its silver excitement, and enjoyed a foretaste of the Washoe craze.

PIONEER NEWS ITEMS.

The number of the *Star* from which we are now quoting, and which was the first supplemental or special paper ever made up in San Francisco for Eastern distribution and transmission by express, contains articles descriptive of the bay and town, of the Pueblo or San José Valley, of Napa Valley and Santa Cruz, of "Benicia City" and Suisun Valley, of

the Clear Lake country and Sacramento Valley, of the King's Lake or Kern River country, of Sonoma Valley, and other points in the Territory. Besides these descriptive articles, we notice a column of Oregon news to December 9, 1847, *via* the Sandwich Islands; a "monthly marine journal," market reports, proceedings of town council, military intelligence, editorial paragraphs, and advertisements. One item mentions that Alexander Forbes has sailed for Mexico with a cargo of quicksilver worth $20,000, the product of three months' working of the New Almaden mine. The discovery of copper, sulphur, and saltpeter (?) in the Clear Lake region is reported. Quotations are made from the *Californian*, the second paper published in San Francisco. One of these mentions that "a steamboat is expected here in the course of next summer from the United States, intended for the San Francisco and Sacramento trade; also, that an order has been recently forwarded from this place to the States for one intended for the bay." The marine report for the quarter ending March, 1848, shows the arrival of fourteen vessels, mostly barks and brigs, from the Sandwich Islands, Monterey, Bodega, San Pedro, Boston, Canton, and Callao. The prices in the market reports average as low as at this day, if not lower. In two months the gold rush doubled or trebled them, and afterward they went still higher. At a meeting held at the "public school-house of San Francisco, March 27th, of which W. S. Clark was chairman and Dr. Fourgeaud, secretary, Sam. Brannan urged the necessity of fitting out a party to explore Trinidad Bay and the adjacent country. Captain Gant, Dr. Marsh, and Dr. Leavenworth (still living in Sonoma), spoke in the same strain. Ross, Brannan, and Fourgeaud, were appointed a committee to obtain all the information possible about the northern coast country, and ascertain the probable cost of an exploring expedition. Some of our readers will remember that an expedition was afterward fitted out, and had a pretty hard time."

PRIMITIVE LEGISLATION.—FIRST SCHOOL.

At a meeting of the town council, held March 29th, E. P. Jones, secretary of the council, and "chairman of the committee for the collection of debts due the town," was authorized to "proceed to collect licenses and taxes." Rather a simple revenue system San Francisco had in those days. A resolution "for the completion of Pacific Street" was passed. It extended from the line of Dupont Street to Montgomery, and Jackson Street had just been "extended" to Sansome. The sellers of spirituous liquors were licensed by the alcalde in those days. "Mr. Clark, chairman of committee for removal of fences to their proper lines, reported progress, and asked for further time." Mr. Clark reported an auction sale of town lots. It would be interesting to see the prices obtained, but they are not published. Persons indebted to the town, were authorized to work on the new street improvements and deduct their wages from their town dues; some property-owners would not object to doing that now. Thomas Douglas, a graduate of Yale College, was announced as the first teacher of the first public school in San Francisco, school to open on the third Monday of April, 1848. The trustees were V. J. Fourgeaud, C. L. Ross (brother of D. L. Ross, who died at the East, lately), Dr. John Townsend, John Sirrine, and W. H. Davis. The course of instruction included Latin and Greek, besides the highest English branches, and the terms were from $5 to $12 for each quarter of eleven weeks, followed by a vacation of two weeks.

BUSINESS MEN OF TWENTY YEARS AGO.

Among the business advertisements we notice the names of W. H. Davis, Robert A. Parker, Mellus & Howard, Ward & Smith ("in Montgomery Street"), C. L. Ross, and C. V. Gillespie, merchants; of Conway & Westcott, who kept the Colonnade House, on Kearny Street, a few doors above Portsmouth Square; of E. P. Jones, former editor of the *Star*, who kept the "Portsmouth House Hotel;" of

L. W. Hastings, lawyer; of William Beere, furniture-maker, on Clay Street; of Dr. W. C. Parker, who offered a ranch for sale at the junction of the San Joaquin and Stanislaus rivers; of McDonald & Buchanan, auctioneers, northeast corner of Portsmouth Square. C. C. Smith notified the public that he kept at New Helvetia (Sacramento) all the necessary animals and outfit for an overland journey, as well as a general assortment of clothing. J. Laird gave notice that he kept a ferry-boat at Montezuma, near the present site of Rio Vista, large enough to cross twenty head of stock, charging fifty cents a head. B. K. Thompson offered a ranch of 640 acres for sale at Stockton, on condition that the purchaser reside upon it personally or by tenant. The "New York Store" (of C. L. Ross) was in receipt of twenty barrels of Santa Cruz rum; and Santa Cruz was also at that early day sending lumber to this port. Several advertisements appear from Los Angeles, and Sonoma. The *Star* advertises itself at $6 a year, and says it is a mistake with some people to imagine that for the sum named, they buy the editor instead of the paper.

Our readers can turn from this newspaper glimpse of San Francisco of twenty years ago and draw their own comparisons. We will only add that the six-page *California Star* of April 1, 1848, was carried overland to Independence, Mo., in sixty days, together with a batch of letters, by Nathan Hauk, the pioneer expressman from San Francisco to "the States." San Francisco papers now reach Missouri in ten or twelve days, and New York in sixteen or eighteen, and they are just as enthusiastic over the future of the city as were the *Star* and *Californian*.

SHRUBBERY ABOUT THE HOMESTEAD.

EXT in beauty to flowers and flowering vines, and equal in point of ornamental effect to both, we class the disposition of shrubbery around the country home. It matters not how small the lawn may be, whether it contains but a hundred square yards or extends to the dimensions of an acre, groups of shrubs adapt themselves to all the requirements of the situation, and clothe what would otherwise appear bare and common with those graceful and natural adjuncts which never appear to so great an advantage as when beautifying a dwelling in the country. Trees of large growth, unless there is ample space for them to spread their branches far and wide, are not so desirable as shrubbery, because they are not capable of producing the same results. In decorating small lawns, the landscape gardener elicits the same effects upon a diminished scale with shrubs that he would obtain on a larger area with trees. There is, however, this additional advantage in favor of shrubbery which is not to be had with trees: Shrubs of fine form can readily be so selected that they shall, in addition to their rich foliage, produce flowers in succession throughout the whole season. There are, for instance, the different varieties of magnolia, which require to be backed by evergreens to exhibit them in perfection—there is the pyrus japonica, with its rich crimson blossoms; the snowball, the flowering currant, the burning bush, the delicate orange blossom; the lilacs, purple and white, and a host of others, all beautiful, and many of them fragrant, and all of them hardy enough to stand successfully our winters with little or no protection. Groups of these interspersed about a lawn and rising in the form of a pyramid, with here and there a deciduous tree lifting itself from the mass, gives an aspect of taste and neatness to the smallest inclosure which can never be attained in any other way. We throw out these hints at this time as introductory to some practical

suggestions on a future occasion, which we trust our readers will be willing to adopt.—*Rural Register.*

INCIDENT IN THE EARLY LIFE OF THE VANDERBILTS.

SOMEWHERE about sixty years ago, Cornelius Vanderbilt commenced life by running a "periauger" between Staten Island and New York. During the day he plied his vocation, and, whenever his duties permitted, visited his second cousin, Miss Sophie Johnson, then a young and comely girl of sixteen, who also lived on the island. Perhaps it was the outburst of his first love that made the young sailor so ambitious, and inspired him with the energy and enterprise he has always exhibited. Certain it is, however, that the cousins married, and the old folks who knew them then, speak with delight of the handsome pair, for they were admitted to be the comeliest couple Staten Island had ever produced. It is unnecessary to trace the commodore from the time he was a ferryman until he was promoted, or, more properly, promoted himself, to the responsible position of captain of a steamboat which plied between this port and New Brunswick, N. J. At the latter place, however, he was proprietor of a hotel, at which passengers from New York to Philadelphia used to take meals, and occasionally a night's rest. It was a kind of half-way house. His wife superintended the hotel while he was engaged in his active aquatic vocation. One evening he arrived from New York, and while sitting at supper, said to his wife:—

"Sophie, I wish I had five thousand dollars, in addition to what I have, to buy shares in the steamboat line; I think it would be a good investment."

"Do you think so, Corneil?" responded his thoughtful partner.

"I do," said he.

She said nothing more, but next day consulted Mr. Gib-

bons, and he advised the investment. Next evening, at supper, she accosted her husband thus:—

"Corneil, I've spoken to Mr. Gibbons about buying shares, and as he approves of your idea, there's the five thousand dollars; buy the shares to-morrow."

As she spoke, she took the amount from one of those old-fashioned pockets that used to be worn under the dress, and handed it to her astonished husband. She had saved the money unknown to him, and it was probably this same money that floated the commodore into fame and fortune. This incident shows what the woman was. The money was wisely sown, and, as is well known, the harvest is great. The subsequent history of Mr. Vanderbilt is the inheritance of all men; and though the part taken by his wife in building up his immense wealth can not be made public, yet it is safe to say that with him she bore the burden and heat of the day, and incited him by her cheering and courageous words to embark in great undertakings, and, by her wisdom, conduct them to successful issues.

In her home she was kind and amiable—a true and faithful wife, a fond mother, and a firm friend. It was in the sacred precincts of the family circle that she was best known; it was there her good qualities were most apparent and most appreciated; and now that she is no more, her cautious counsel, her motherly love, and her bright face, beaming with good nature, will be sadly missed.

Mrs. Vanderbilt was no ordinary woman; far from it. Independently of her position as the consort of one of the notable specimens of self-made men, she had inherent in herself elements that raised her above the level of ordinary women. She was just the woman to be the wife of Cornelius Vanderbilt; intelligent, energetic, of an ardent, hopeful temperament, and withal kindly, motherly, and purely womanly. It is certain that she relieved him of all the care of a large family, conducting her household affairs well and wisely, superintending the education of her children, and bringing them up in the way they should go.

She was the mother of thirteen children, ten of whom are living, and three lie beside her in the tomb; and she was

grandmother of about forty children, of whom thirty-one survive her. Take her all in all, it would be hard to find her like in these degenerate days, and she is a bright example to the rising generation of women of what a woman, a wife, and a mother should be. A high and holy authority states that the days of the righteous shall be threescore years and ten; and she died full of years, full of honor, and deeply and widely mourned.—*N. Y. Sun*, September, 1868.

THE INDIAN WOMAN'S LOVE.

A TALE OF OREGON.

GIRLS, you plague the life out of me. A story—humph! Why don't you take a book, sit down quietly, and read one? Because you want to hear me tell one? Nonsense! you can read a better one than I can tell. You are more like little children than great, grown up girls, and—there, there, let me alone! I suppose I shall have no peace till I spin the yarn. If I ever get into such a crowd again! Now, Mahala, you sit down there, and keep still, or I'll pull your ears. Angie, take that seat, and tie up your tongue just fifteen minutes if you can; and, Hattie, take the little stool, and sit close to me. There, Mahala, keep your fingers off the piano; don't pinch me either, or I shall——Well, well—I'll tell you the story as it was told to me.

In that part of the mountainous region of Oregon known as the Yamhill country lies a small but beautiful valley, surrounded by a high chain of hills that gives it that picturesque character which is so often found in the scenery of the Pacific coast, and on which the eye rests with pleasure. This small valley is wholly circular in form, about two and a half miles in diameter, with a rich soil, well watered, the Yamhill river flowing nearly through its center, with one or two fine creeks which make down from the mountains to add their waters to those of the clear and sparkling Yamhill.

It is only a few years since the dark-skinned natives of

the mountains claimed this charming spot as their own, in fee-simple—a title which they possessed by occupation from time immemorial; and it was a favorite resort for the tribes living in that vicinity who bore friendly relations to each other. It was to them a land of Egyptian plenty, for the moose and the elk, the deer and the antelope ranged in large herds over the beautiful valley, affording to the unsophisticated sons of the forest not only a store-house of food and raiment of their skins, but the excitement of the chase.

NEZ PERCÉS INDIANS, I. T.

The surrounding hills were covered with majestic firs and oaks, which gave them the means of erecting cabins, comfortable for them during the winter snows, and fuel to protect them against the cold. But this calm security, this inertness of life, could not last forever, and a cloud was lowering over the heads of the devoted red men, which was to burst and sweep them, in time, not only from this mountain paradise, but from the earth itself. The white men came, and when did the two races dwell in harmony together? The stronger rules the weaker, while the latter gives way step by step until he may be compelled to relinquish all—home,

friends, and country—and is eventually swallowed up in the great changes of the world, till even his memory is forgotten. The Indian yields to the vices of the white man without learning his virtues, while new and dissolute habits, with the curse of fire-water, soon do their worst, and shortly the bones of the Indian race lay unmarked and unknown in their native homes.

When the whites made their appearance in this part of Oregon, they found the natives to be a much superior race to the Indians of California. Without being civilized, they were more advanced than the Digger tribes, for they built houses of wood, and clothed themselves warmly with the skins of the animals they killed in the chase; they were fairer in complexion, braver in war, and more intellectual than the natives of the south.

Subsequently, when the Americans became possessed of the country, and the power of the Indians faded before the march of the Anglo-Saxon race, this beautiful valley was set off by the Government as a Reservation, where such tribes as chose to come within the folds of the paternal Government might do so. Several tribes were gathered here. Individuals of them adopted the mode of living of the whites, and worked, planted, and reaped, as they were taught; but by far the most were hangers-on, indulging in the vices of their conquerors, making the problem a doubtful one if this dark mass of humanity were really more happy, or better off, for themselves, than when they ranged the wild mountain, or the blooming valley, as lords of the soil.

Here are now congregated portions of the Clackamas, the Tuwololy, the Umpquas, the Rogue River, and Kallapooyas tribes, and it remains to be seen what the effect will be of bringing so many together, some of which, in former days, were in open hostility to each other.

It is at this point that Fort Yamhill is located, and at this time, July, 1862, is garrisoned by soldiers of the United States. The relations existing between our people and the Indians of the Reservation are of a peaceful character, and a free communication exists between them.

A short time ago, only a few weeks since, the surgeon of

the regiment was strolling on the valley, enjoying the beautiful and grand scenery of the surroundings, and with a good deal of interest visiting the villages of the different tribes congregated there; he called at the cabin of one of the principal chiefs, and asked for a drink of water.

An elderly but fine-looking Indian presented him a cup of the pure, cool, sparkling element with a hearty good will which might become a citizen of the refined world. "Drink," said he, "it is as cool as the mountain snows and as pure as the Spirit of the Hills." The intelligent look of the speaker interested my friend at once in his favor, while the neatness of the house and its apparent comfort excited his surprise, and he complimented his host upon its appearance.

"Yes," replied the Indian, in his own language; "it is better than shivering in the winter cold in our old houses, and it is better to raise the good things of life in the ground, rather than gather seeds of the wild grass on the plains. White men are great, while the red man is weak. We are children beside them, and they teach us much that is good, with much that is bad. But all Indians will not learn good. Some like the shadows of the hills and the darkness of the forest—they keep their spirits in the shade, away from the sunlight of the white man's knowledge."

"Who are you, that talks so much like the white man?" asked the surgeon, in surprise. "Indeed, all Indians are not like you."

The Indian straightened himself to his full height with dignity, while he slowly replied, as if with conscious pride, though with something of native hyperbole:—

"I am great with my people. I am the Great Chief of the Yamhill country. I am the fir-tree of the mountains. My spirit is with the clouds; my strength is with the cougar. My bow was tough, my hand was strong, my heart knew no fear, my enemies fled from my war-path."

"Great, and brave, and good, you must be happy."

"Ugh! happy! My heart is boiling in the furnace of the fiery mountain." And his eye seemed lighted with strange luster.

"How! a man like you, with trouble to oppress his heart, with every thing so nice about you? Do not your wife and children make your heart glad?"

His countenance became agitated, and some internal struggle seemed heaving his manly breast. Subduing his emotion, he replied:—

"Stranger, do you think the red man has no trials? Do you think the river of his life flows in a gentle current to the great Sea of Death? I tell you, there are cañons, and falls, and rapids, and rocks for the red man to pass as well as the white. The serpent may come to his house, and his little ones be strong; the cougar may watch by his path and spring upon him or his chickens; the tempest may make his home desolate, and his camp-fires may be extinguished for ever. You look like a good man. Sit upon that stool and listen."

My friend was fascinated by the chief's manner as well as deeply interested, and he sat down to listen to an Indian's tale.

I have a wife and children, and when I look upon them and can forget all but them, my heart is glad. They are mine—I love them. But a thorn of cactus that finds its way into the hand, be it ever so small, rankles, and festers, and becomes a putrid sore. The thorn is in my heart.

Nineteen snows ago I had a bright-eyed little girl. She was beautiful as the fawn, and active as the antelope. Her merry laugh was like sparkling waters, and wherever she went, all things seemed glad. Shall I tell you she lived in my heart? At last the white men came with their wives and children. They saw my wild-flower and loved her. Who could help it? The Great Spirit of the Hills made her to be loved. They wanted to take her home, and teach her to be a white woman, to be one of their children, to teach her to make the paper talk, and to have the paper talk to her. I knew white people were wise, that they knew all things in the world, and many things beyond the blue sky, and I was willing my girl should learn, and be wise, and great, as she was good. Seven snows had now passed over her head, when I gave my consent that she might go and

live with the white woman eight snows, and then she should come back to my arms and my heart. She went, and found a happy home with her new friends. She was their child for the time, and they loved her as such. They taught her all they knew, and she was their pride as well as mine. At last the eight snows came, and I called for Mona. I would have her with me. But my white friend said: "She has more to learn; leave her in my care two more snows. I will send her to San Francisco, the big city, where she will see many new things, and be taught more than we know how to teach." It was a hard struggle, but I knew the white people were my friends, and, for Mona's sake, I consented. The two snows came, and Mona returned beautiful as a young doe. Oh, how my heart swelled with delight to look in her eyes. I could scarcely think it was my child, my own darling. And then she knew so much. She could tell of things in the blue sky that I never heard of before. She could place the tall trees on paper as if they grew there, and she could sing sweeter than the mocking-bird. My white friends would have kept her, but I had waited so long I would not consent. She was mine now, and I would have her in my own home. She came, and my cabin fire was a bright one. My bird still sang and was happy. Would you think of a tempest when all was bright sunshine?

I was a warrior. I had followed the war-path against the Clackamas, the Calapooyas, and the Tillamooks, and I had taken many slaves. Among these I had taken with my own hand a young chief of the Calapooya, an active young brave of twenty-two snows. To do him justice, he served me well; he was among the first in the hunt, and none sent the canoe forward with stronger arm; but he was my slave. Only a few moons had gone by after Mona's return, before I saw she was changed. She forgot her old father and mother, and often wandered away alone. Sleep was not in her eyes, and her tongue had forgot its office. Was she sick? No. Was she contented with her home? Yes. Did she want a new dress? No. Would she have other food? No—all was good.

I feared she was ill, and would have sent for the white

medicine man. No, she was well. One day I was returning from the chase, when in a cluster of manzanitas near my home, I saw her—my child, my Mona, my best beloved bird, in the arms of my slave. Had the fire of the clouds struck me down! Had I fallen from a huge ledge of rocks! My head turned round. I forgot that I was on earth. All came to me then, and rage made me blind. I drew my bow—I never missed my aim—death was in my arrow. They saw me. She threw her arms around the slave, and cried, "Shoot him and you kill me; the same arrow shall pass through us both." I could not kill her—she was my child—she was strong in my heart; but the slave—the slave to steal my Mona! My arms fell to my side. My ill-starred, my—my, oh, my beloved one rushed to me, threw her arms tightly around me, and cried, "Fly, Omana! fly; I am yours in life, I am yours in death—fly, Omana, I'll meet you."

The slave fled, like the coward he was, and weak and faint I was led by my child to my home. She loved my slave—I talked to her as I could. My white friends talked to her, and wept. They would take her back; she should live with them, and be their child again. She should have clothes, and food, and love, such as she had had. Would she come back and make their hearts glad? Without a tear in her eye she took her white mother's hand, while her eyes sparkled like the stars. "My white mother and father, I love you as I love my life. You have been kind and good to me always. I have wanted nothing from you. And, my dark father," she continued, turning to me, "I am of your kin; I love you as my heart can love, but I can not go back. I am an Indian in my heart—an Indian I was born, an Indian I will die. I can not mix with the whites; their laws and customs forbid, and I love the wild woods and mountains better than I love the cities and towns of the white people. And, oh, above them all, I love Omana, slave as he is, better, ay, far better than life; and if I would live for you, I will die for him." What could we say, what could we do? She would be a mother, and her child's father was my slave. Why did the spirit of the

burning mountain heap coals of fire upon my head? I led my girl back to our home.

"And your slave, the husband of your Mona—what became of him?"

"Oh! oh! oh! My braves had been upon his trail, and in a few days word was brought that the wretch had been found dead, his body suspended to the limb of a tree, with his flesh filled with burnt splinters, and the filthy turkey-buzzards were having a glorious feast upon a human body —Ugh!"

"And your daughter—"

"She disappeared the day after the word was brought. We searched and searched for two days, when at last our path led to where the slave died. He was no longer suspended. On the ground lay the lifeless form of my—my—Mona, and her arms clasped, in the cold embrace of death, by the bones of my wretched slave."—A. DELANO, "Old Block," in the *Sacramento Union.*

SIC VITA.

BY TAUGENICHTS.

Hark!
  Night!
Dark!
  Sight!
Wife!
Strife!
Life!
  Cry!

A soul
  Is born.
Time's roll
  Will scorn,
Will strive,
Will thrive,
Will live—
  Death gone.

Helpless one!
Mother's breast
Lie upon,
There thy nest.
Nothing fear,
Naught so dear;
Guard thy rest.

Oh! lovely child!
Exotic rare!
From heaven beguiled
To make earth fair!
So pure within!
So touched with sin!
Thee heaven must win!
Thee heaven must wear.

See the noble youth—
Prey to impulse wild,
Loyal to the truth,
Often false. A child
Wanting steady hand,
Wanting self-command,
Drifts toward sea or land—
Heaven send breezes mild.

The steadfast steps of time
Have brought the manly soul
Where, filled with thoughts sublime,
He views the nearing goal.
He pants to draw the sword,
To fight for truth and God.
"Thy servant help, O Lord!
Thy banner to unroll."

And lo! he boldly springeth
Where fierce the battle rages,
And loud his war-cry ringeth,
As he the foe engages:

"God's Truth." Right well he bore him.
But Error stood before him,
Though heaven's banner waved o'er him—
And still the contest wages.

And now meridian height is won!
With orb-like splendors blazes forth
God's noblest work beneath the sun!
Hail! matchless habitant of earth!
Imperial mind! with angels kin!
Seraphic spirit! pure from sin!
This fleshy garb but hems thee in!
Death is thy life! The grave thy birth!

And the shadows eastward fly,
Day is dying in the West.
Down the slopes the pathways lie—
What the thoughts that fill his breast?
"Man is false, and error strong;
Truth is slow, but swift the wrong;
Life is short, God's time is long—
Courage, soul! and do thy best."

False hues deceive no more,
But hope is ever young.
"Set lights along the shore,
Let heavenly strains be sung."
Bright visions fill his mind,
Love grows for all mankind;
"Earth's duties closer bind,
In heaven thy crown is hung."

Mellow harvest come;
Ripened now the grain;
Bear it to its home.
Creaks the loaded wain—
Noble sheaf is he!
Splendid sight to see!
Life's maturity!
Join the heavenly train.

Tremble his limbs
  Like pines 'neath snow;
Time's frost bedims
  His vision now.
His race is run,
His work is done;
Beyond the sun
  His years shall flow.

Marble face—
  Sweet repose—
Not a trace
  Of earthly woes.
Lay the clod
'Neath the sod;
Up to God
  The spirit goes.

Sun shine,
  Buds blow,
Creep vine,
  Grass grow,
Sigh breeze,
Weep trees;
Birds, bees
  Chant low.

Bell
  Toll,
Knell
  Roll.
Born,
Worn,
Gone
  Soul.

S. F. Dramatic Chronicle, April 2, 1868.

ARTISTIC EVIDENCE OF A REMOTE COLONIZATION IN AMERICA BY A MARITIME PEOPLE.

T the late meeting of the American Society for the Advancement of Science at Chicago, Dr. Gibbons, of Charleston, S. C., read a paper on the artistic evidences of a remote colonization on the great Western or American Continent by a maritime people of distinct nationalities before the modern era; of which paper the following is an abstract:—

The antiquities of America have attracted the attention of Europe more than they have those of our own country generally. The evidences of the neighboring State of Wisconsin, carefully surveyed by Mr. Lapham, and published with the Smithsonian collections in 1853, strongly incline us to believe that the earth mounds of Northern America had an existence anterior to the curious architectural structures in Yucatan or the civilization of Peru and its neighborhood. The red men of America were never charged to have invented alphabetic letters, yet at the head of the great lakes in the State of Wisconsin, there are eleven such characters, apparently used as numerals, found on headlands of water-courses, as if to indicate distances, in Coptic and Etruscan characters. Baron Humboldt describes some sculptures on rocks near the banks of the Oronoco, which he considered Punic, and among the monuments of Central America, several letters of the Grecian alphabet are distinguishable. The profiles of faces exhibited in the hieroglyphics copied by Mr. Catherwood, indicate a variety of nations from different quarters of the earth. There are aged men in metallic armor, wearing beards and arabesque ornaments, that have a Milesian physiognomy, while seamen in cloth caps and mustache bear much the air of dashing midshipmen of the present time.

There are women wearing hoods and children carrying medals on their breasts, while there are the scriptural forms and countenances of priests, artisans, and seamen, a little

caricatured according to an Eastern artistic practice, and negro countenances intermingled with those of the aborigines. There are prostrate figures in armor with grave and serious countenances, having native Indians standing on their backs to show them as their conquerors. The aborigines have forced the foreign artist thus to describe events they were not competent to in the same style and perfection.

The style of the buildings, erected upon artificial mounds, are described to resemble those east of the Euphrates and of the island of Ceylon. The provisions for the preservation of grain and ample supplies of water characterize the habits of the East. The mounds of Wisconsin also display the forms of arms and weapons of an Eastern people, while numerous implements of mining are also shown in the earth-works.

In the collection of Dr. Davis of New York, who has given great attention to the antiquities of the mounds of Ohio, was found a rock weight which approached a half pound avoirdupois, a standard of antiquity introduced by the Syrians into Cadiz of Spain eleven centuries before the modern era. If this should be confirmed by other stone weights of the same standard, it will open a very curious field for speculation, as these commercial weights are known to prevail throughout the vast empire of China, at Timbuctoo, in the heart of Africa, and were used by the Carthaginians and the Hebrews, to which last nation they were recommended by Moses as perfect and just weights. Such a fact in the Hebrew writing seems an evidence that these exact weights existed in his time. We are inclined to attribute to a maritime people of a very early antiquity a knowledge of the form and movements of the earth. The globe with wings, attended by a serpent, the emblem of wisdom, was a celebrated symbol over the Egyptian temples—in our opinion the result of some prominent astronomical discovery. Mr. Stephens has described a stoco ornament of this description with the wings of the globe reversed; a geographical description of the relative positions of Egypt and Yucatan, which are the antipodes

of each other. As it is only possible to give a brief outline of very numerous ancient arts, I will only describe the appearance of earthen vases in Peru, apparently designed to perform the functions of distillation, a simple art of separating a spirit from its combination employed by the wild Tartars and the people of Ceylon, whose simple contrivances are described by Dr. Davy. The ancient nations were famous for their pottery and other manufactures, as well as for nautical explorations. The resemblances were strong between the pottery of different portions of America and those of the ancient people of the Mediterranean.

The union of a very small portion of tin with copper tools and arms is another indication of early connection between Asia, Africa, and America, since those exhibited by Mr. Layard, from the ruins of Babylon, show the same peculiarities. Egyptians, East Indian, and Chinese weapons are also thus prepared to procure extreme hardness of temper. It is not probable that such art was the result of chance, since copper alloyed with tin is not found native. The earth-mounds commencing at the head of the great northern lakes attend the great water-courses to the Gulf of Mexico. They appear to have served as places of defense and for trade; contained altars for worship and convenience for cattle, like the mud forts of India.

SIR ROBERT PEEL'S PRAYER.

THE *Christian Times* says the following is a copy of prayer, found in the late Sir Robert Peel's private drawer of his dressing-case, after his sudden death, July, 1850:—

"Great and merciful God, ruler of all nations, help me daily to repair to Thee for wisdom and grace suitable to the high office whereto Thy providence has called me. Strengthen, O Lord, my natural powers and faculties, that the weighty and solemn interests with which Thy servant is charged may not greatly suffer

through weakness of body and confusion of mind. Deign, I beseech Thee, to obviate or correct the ill effects of such omissions or mistakes in my proceedings as may result from partial knowledge, infirmity of judgment, or unfaithfulness in any with whom I have to do. Let Thy blessing rest upon my sovereign and my country. Dispose the hearts of all in high stations to adopt such measures as will preserve public order, foster industry, and alleviate distress. May their religion flourish, and peace be universal. Grant that, so far as may consist with human weakness, whatever is proposed by myself or others for the general good may be viewed with candor, and that all wise and useful measures may be conducted to a prosperous issue. As for me, Thy servant, grant, O merciful God, that I may not be so engrossed with public anxieties as that Thy word should become unfruitful to me, or be so moved by difficulty or opposition as not to pursue the narrow way that leadeth me to life. And, O most gracious Father, if, notwithstanding my present desires and purposes, I should forget Thee, do not Thou forget me, seeing that I entreat Thy constant remembrance and favor only for the sake of our most blessed Advocate and Redeemer, Jesus Christ, to whom with Thee and the Holy Spirit be glory forever. Amen."

THE LATE PROFESSOR FARADAY ON SPIRITUALISM.

THE following letter from the late Professor Faraday has been furnished the *Pall Mall Gazette* by John Tyndall. The letter was addressed to Sir Emerson Tennent in response to an invitation from that gentleman to personally investigate the phenomena reported to have occurred in the presence of Mr. Home; and Mr. Tyndall, in publishing the letter, says he will hold himself in readiness to witness and investigate such phenomena as Mr. Home may wish to reveal to him during the month of June:—

FOLKESTONE, June 14, 1861.

MY DEAR SIR EMERSON:—I can not help feeling that you are indiscreet in your desire to bring me into contact with the occult phenomena which it is said are made manifest in Mr. Home's presence. I have investigated such in former times, during some years, and as much as I thought consistent with the self-respect that an experimental philosopher owes to himself. It would be a condescension on my part to pay any more attention to them now; and I can only do so under the persuasion that all concerned wish to have the phenomena unraveled and understood, and will do all they can to aid in such a result. To settle whether I can go or not, I wish to put to you the following points:—

1. Who wishes me to go? to whose house? for what purpose?

2. Does Mr. Home wish me to go?

3. Is he willing to investigate as a philosopher, and as such to have no concealments, no darkness, to be open in communication, and to aid inquiry all that he can?

4. Does he make himself responsible for the effects, and identify himself more or less with their cause?

5. Would he be glad if their delusive character were established and exposed, and would he gladly help to expose it, or would he be annoyed and personally offended?

6. Does he consider the effects natural or supernatural? If natural, what are the laws which govern them? or does he think they are not subject to laws? If supernatural, does he suppose them to be miracles or the works of spirits? If the work of spirits, would an insult to the spirits be considered as an insult to himself?

7. If the effects are miracles, or the work of spirits, does he admit the utterly contemptible character, both of them and their results, up to the present time, in respect either of yielding information or instruction, or supplying any force or action of the least value to mankind?

8. If they be natural effects without natural law, can they be of any use or value to mankind?

9. If they be the glimpses of natural action not yet re-

duced to law, ought it not to be the duty of every one who has the least influence in such actions personally to develop them, and aid others in their development by the application of every critical method, either mental or experimental, which the mind of man can devise?

I do not wish to give offense to any one, or meddle with this subject again. I lost much time about it formerly, in hopes of developing some new force or power, but found nothing worthy of attention. I can only look at it now as a natural philosopher; and, because of the respect due to myself, will not enter upon any further attention or investigation, unless those who profess to have a hold upon the effects agree to aid to the uttermost. To this purpose they must consent (and desire) to be as critical upon the matter and full of test investigation in regard to the subject as any natural philosopher is in respect of the germs of his discoveries. How could electricity, that universal spirit of matter, ever have been developed in its relations to chemical action, to magnetic action, to its application in the explosion of mines, the weaving of silk, the extension of printing, the electro-telegraph, the illumination of light-houses, &c., except by rigid investigation, grounded on the strictest critical reasoning and the most exact and open experiment? And if these so-called occult manifestations are not utterly worthless, they must and will pass through a like ordeal.

As I do not want to debate this matter with those who have already made up their minds in a direction contrary to my own, but (if I see sufficient reason) only to work it out with such a desire to find incontrovertible proofs, independent of opinion or assertion, so I wish you would show this letter to Mr. Home, and those who want me to meet him and them on his ground; after which you will know whether you should persevere in asking me. You will understand that I decline to meet any whose minds are not at liberty to investigate according to the general principles I have here expressed.

Further, I claim the right of publishing the whole or any part of this letter, or any future written communication

that may arise out of it, in any manner that I may think fit. Ever, my dear Sir Emerson,

Your very faithful servant,

M. FARADAY.

You will see that I consent to all this with much reserve. and only for your sake. M. F.

SANTA MARGARITA.

"I HAVE wandered over many a bright and beautiful land, but never, even in the glorious East, in Italy, Spain, Switzerland, or South America, have I seen a country so richly favored by nature as California, and never a more lovely valley than the Santa Margarita upon the whole wide world.

"J. ROSS BROWNE."

BRIGHT Valley of Beauty! in dreams I behold thee,
As fair as the first time I looked on thy face,
In the glow of the warm summer smiles that enfold thee,
In the peace and the rest of thy mild tranquil grace.

I hear in my fancy thy rivulets ripple,
And the winds' solemn dirge in thy pines' tasseled boughs;
I see o'er thy greenwoods the sunbeams that glisten,
And thy dark mountain heights with their cypress-crowned brows.

I see, through the veil of the mist that hangs o'er them,
The thickets they weave of their wild vines and sage;
And the low dimpled hills that are smiling before them,
Like childhood reclined in the lap of old age.

When the chimes of the spring-day rang out through thy windings,
I looked on thy scenes for the first and the last;
But my thoughts are so fraught with the spell of thy beauty,
I scarcely can deem that the vision is past.

The breezes that swept from thy mountains were laden
With the perfume they wooed from the blossoming bay,
Or fragrant and fresh as the breath of the morning,
From the pine-trees that swayed to their wild, careless play.

Though the wild oats o'er valley and hill-side are golden,
I think of thee but in thy spring's early hours;
When the emerald waves of thy soft undulations
Were bright with the glow of their tropical flowers;

When the trees that o'ershadowed the quiet Salinas
Gleamed out from the mists of the dark eastern hills;
When the sunlight went by in its rich wavy splendor,
And the air was alive with the lark's gushing trills.

Perchance they may deem thee "too present and real,"
Whose fancies can prize but the distant and dim;
Whose dreamings are all of the Old World's ideal,
And the hallowed refrain of its time-honored hymn.

But one who has stood in the glow of the Orient,
Where the gleams of the sunlight are nursed into birth,
Who has rifled the climes from the poles to the tropics,
Has called thee as fair as the fairest on earth.

With an ear trained to Nature's sweet musical echoes,
With an eye that can read all its lights and its shades,
He has heard the deep voice of thy low twilight murmurs
From the rich, blended hues of thy woodlands and glades.

ANNIE A. FITZGERALD,
in *S. F. Democratic Press.*

LINES SUGGESTED BY READING MARK TWAIN'S LETTERS FROM PALLISTYNE.

BY JOB SHAE, POET LARRYAT UV GOAT ISLAND.

HERE's a man that looks at things without speks;
He looks thru his own ize, he sees what is vizib'e;
But his ize is uv the earth, earthly;
They never rolled in a fine frenzy like a poet's,
For they have no spiritool vishun.
There is no nonsense about this man; he is wide awake;
You can't fool *him* with your old-time stories.
He's a Californian uv Californians, and a Yankee uv Yankees;
As cute as a clock peddler, as bright as a noo dollar.

He is funnyer than the clown in the cirkus,
And can be comikle without burnt cork.
He perambulated Pallistyne as he would a cattle ranch in San Bernardino;
He sot down and cut his korns under the ceders uv Lebanun,

And said, "These is no trees to brag on;
"There is shugger pine in the foot-hills that's bigger;
"And for timber, what are they to redwood!"
He visited the garden of Gethseminy,
And thor't it wasn't fit for a cow-pastyer;
It was mighty poor grazin' ground,
And wouldn't grow no potatose;
He rode thru the Valley uv Jehoshafat,
And heerd the roarin' uv the Bulls of Bashun,
And he sed to 'em, "Dry up, you old humbugs;
"How quick a few Greasers with lassoos
"Would stop all that snortin' and bellerin';
"But I don't 'spect you'd pay the expense of slorterin'.
"You look tuffer than Mexican bull-beef,
"And wouldn't bring two cents a pound in San Francisco."

This yer man has a sharp percepshun;
What he sees he sees clear—he sees to the bottum uv it;
He's as keen as a brier; but there's things he can't see at all.
He's as blind as a bat and as deef as an adder;
He sayl'd over the oshun, and it sung him no song;
Sunset and moonlite stars and clouds had no messige for him;
He walked the streets uv Jeroosalem; he stood by the sea uv Gallylee;
He passed over Jardon; he camped on the Mount uv Olives;
And the things that he seen, and that he thort, and that he felt,
Were the things a Digger Injun uv ordnery smartness
Mite hev seen, and thort, ef he'd gone on a pilgrimage to Jeroosalem.

[Note by the Orthur. Ef these lines air sum uv 'em a little irreguler in length, and jolty in meter, it's en consekens of the joltin' uv the kars, the pome having been writ on the train from the Point connectin' with the 5:15 bote.—J. S., P. G. I.]

J. F. BOWMAN,
in *Oakland News*, April, 1868.

THE CRICKET.

THE cricket is a curious little insect. It has given rise to two proverbial expressions. In France, people say: "silly as a cricket," while in England and America we say, "merry as a cricket." Crickets eat grass, seeds, and fruits, conveying them to their holes, and though they are very fond of drinking the dew on leaves and flowers, they are very careful not to wet themselves on their journeys in search of food. The young live in peace, but when they grow up they manifest a most belligerous disposition, and are continually fighting with one another. The boys in Germany are very fond of keeping crickets in boxes for the sake of their song, and for the purpose of watching their battles. What the game cock is to the Cuban, and the bull-dog to the Englishman, the cricket is to the German youth. Their contests are very sharp and very amusing. According to the way in which they happen to meet, they butt like rams, kick like horses, or scratch like cats, and the contest is unceasing in its ferocity, until one of the insects flees from the field or is disabled. It must be remembered that the European house cricket is not known in our country. Its song is much more varied and much cheerier than that of the species which sometimes finds its way into our hearths.

LINES ON AN AUTOPSICAL EXAMINATION.

WRAPT in the stony sleep of death,
  Rigid and wan, the subject lay;
No sob revealed the vanished breath
  Of life that warmed the senseless clay.

Flared o'er the blank, impassive face,
  The dim, uncertain light I bore
In flickering shadows, till the space
  Seemed peopled from the Stygian shore.

I bent above the naked breast,
Guiding the scalpel's glittering way—
Saw the stilled heart that, once at rest,
Shall throb no more to passion's sway.

No more shall gladness make its tone,
Or pride, or grief, assert their power,
Indignant sorrow claim her own,
Or hope beguile its darkest hour.

Oh, that the enfranchised spirit might
Return to its forsaken frame,
That I might be resolved aright,
If Death is awful but in name—

If, when the lamp of life burns low,
And slowly ebbs the vital tide,
Is faintly heard the murmuring flow
Of waves on Lethe's gloomy side—

Or if, before the pulse stands still,
Pass all the entities away,
Is death a mere mechanic thrill—
Its chill, the morning dew of day?

Oh, what is heaven? departed, tell!
Illimitable—endless—vast—
Does not the vicinage of hell
Alloy the present or the past?

Say, traveler to the "unknown shore,"
Whose path no human eye may trace,
If thou canst hear the ceaseless roar
Of men beneath thy dwelling place?

Awake, impassive, and bewept!
Declare what codes of thought are true
Or is that mighty secret kept
Still hidden in that vault of blue?

Do they who in this life have striven
Truly and well in Wisdom's train,
In death, with sight divinely given,
Behold Truth's hallowed, *whole* domain?

May one who lived throughout this life
A vassal, or the sceptered dead,
Released at length from mortal strife,
Like Dante walk, by Virgil led?

Will those whose unassisted thought
Forestalled almost our later day,
Titans of mind, with wisdom fraught,
Lead the fond tyro toward the day?

Peace, futile dreamer, Reason cries,
Have done with speculations vain;
What he is soon thyself shall be,
What boots this esoteric strain?

Thus mused I, wrestling to retrieve
A creed from death—from doubt relief:
I waver, pause, and half believe—
"Help thou, O Lord, my unbelief."

SALATIA.

O Sea! O Mighty Sea!
Chorusing eternally
Unto the shore;
Chanting in mystic strain
Of tempest, storm, and rain,
Forevermore!

O Sea! O Fearless Sea!
Dashing upon the cliffs,
Smiting the rocks;
Drench me with your delight,
Come in your haughty might,
I woo your shocks!

O Sea! O Lion Sea!
Grasping your shining mane
I spurn control;
And more and more I feel,
Hearing your thunders peal,
Freedom of soul!

O Sea! O Savage Sea!
My heart takes stronger throb
Breathing your name;
Off life's worn sense I strip,
And back to Nature slip
A child untame!

W. A. KENDALL,
in *California Weekly Mercury*, May 10, 1868.

JOB A PRINTER.

AT a printer's festival in Minnesota some years ago, Judge Goodrich made a speech, in which he referred the invention of printing to a higher antiquity than is usually ascribed to it. He undertook to prove that the patriarch Job knew all about it, by quoting from him the following passage: "Oh, that my words were now written! Oh, that they were printed in a book, that they were graven with an iron pen, with lead in a rock forever!" The Judge considered this undoubted evidence that Job understood the arts of writing, printing, engraving, stereotyping, and lithographing. He mentioned them in their regular order, as they have been discovered.

THE USES OF MOUNTAINS.

MR. RUSKIN notes it as one of the most prominent uses of mountains, that they cause perpetual changes in the soil of the earth. The physical geographers assure us that if the whole matter of the Alps were shoveled out over Europe, the level of the continent would be raised about twenty feet, and this process of leveling is continually going on. By a calculation which he made in the valley of Chamouni, Mr. Ruskin believes that one of the insignificant rivulets, only four inches deep, carries from Mount Blanc

eighty tons of granite dust a year, at which rate of theft at least eighty thousand tons of the substance of that mountain must be yearly transformed into drift-sand by the streams, and distributed by the streams below. On Whiteface Mountain of the Sandwich group, a slide took place in 1820, which hurled down huge blocks of granite, sienite, quartz, feldspar, and trap rock, and cut a deep ravine in the side of the mountain several miles in extent. But compensation was made in part for its destructive fury. An extensive meadow at the base, which had borne only wild, coarse grasses, was rendered more fertile by the fine sediment, here and there four or five feet in depth, that was distributed upon it, to compensate the wastes of the harvests. The hills which, as compared with living beings, seem everlasting, are, in truth, as perishing as they. Its veins of flowing fountains weary the mountain heart, as the crimson pulse does ours; the natural force of the iron crag is abated in its appointed time, like the strength of the sinews in a human, in old age; and it is but the lapse of the longer years of decay which in the sight of its Creator distinguishes the mountain range from the moth and the worm.

A MOUNTAIN VIEW.

Thou who wouldst see the lovely and the wild
Mingled in harmony on Nature's face,
Ascend our Rocky Mountains. Let thy foot
Fail not with weariness, for on their tops
The beauty and the majesty of earth,
Spread wide beneath, shall make thee to forget
The steep and toilsome way. There as thou stand'st,
The haunts of man below thee, and around
The mountain summits, thy expanding heart
Shall feel a kindred to that loftier world
To which thou art translated, and partake
The enlargement of thy vision. Thou shalt look
Upon the green and rolling forest tops.
And down into the secrets of the glens,

And streams, that with their bordering thickets strive
To hide their windings. Thou shalt gaze, at once,
Here on white villages, and tilth, and herds,
And swarming roads, and there on solitudes
That only hear the torrent, and the wind,
And eagle's shriek.

CHANGE IN THE CLIMATE OF CALIFORNIA.—ITS CAUSES.

THAT there is a gradual but certain change going on in the climate of California, no person who has inhabited the State since 1849, and paid any attention to the change of seasons, can for a moment doubt. But the *cause* at work, which is silently but surely producing this change, appears to be a mystery to the great mass of the people, and imperfectly understood by the man of science, as well as the learned *savan*. It is a well-established principle in the science of meteorology, that rain is produced from vapor, and that vapor is produced by heat.

The annual amount of evaporation from a given surface of water in the interior of the country is greater than that of the rain which falls on the same surface, but the amount of evaporation from the surface of the ground is generally less, particularly in mountainous districts. If the vapor which is formed is allowed to accumulate over the evaporating surface, it will by its reaction retard the free ascent of the other portions of vapor; but if it be constantly removed as fast as it is formed, the process will evidently go on more rapidly. Vapor contains a large amount of latent heat, and water can not be converted into an aeriform state without the supply of the necessary quality of this principle. Hence the higher the temperature, or the more freely the evaporating surface is supplied with heat, the greater will be the amount of vapor in a given time.

It is an historical fact that, before the settlement of California, by the Americans, rain was seldom if ever known to fall during the summer months; and it is stated by Lieut.

Wilkes, at the time he visited California, that no rain had fallen for thirty-seven months.

Since the occupation and settlement by the Americans, two great causes have been at work to produce the change which is now becoming apparent to the minds of all. The first and chief cause of change is the introduction by the Americans, of a general and extended system of agriculture; and the second cause is, the cutting down the forests of heavy timber, thereby exposing a large surface of earth to the heat of the sun. A general system of agriculture exposes a large portion of the uncovered surface of the earth to the direct rays of the sun; the earth then becomes heated, and evaporation goes on rapidly, and in addition to the evaporation from the earth, the vapor carried in by the prevailing west wind from the sea, instead of being condensed and absorbed by the grass-covered and cold but dry earth, will then as it passes over a heated surface and comes in contact with highly rarefied air, at once ascend to the point of condensation, when clouds will be formed and the accumulated vapor be precipitated to the earth in form of rain.

It has been, and is now, the general opinion of the great mass of the people here, and in the Atlantic States, that California never will be a good agricultural country from a want of sufficient rain during the summer months; and long treatises on atmospheric phenomena have been written and published by learned *savans* here, to prove the impossibility of a change in the climate of California. Time and the operation of well known and immutable natural laws, will soon demonstrate that California, from her geographical position, with her long line of sea-coast and prevailing sea-breeze, only requires a general system of agriculture to make her the most productive State of the Union, from the fact of her mild climate, attended as it soon will be with abundance of rain throughout the year.

The prediction is now made that, if a general system is pursued for five years more, at the end of that period of time there will be a sufficient amount of rain to bring to perfection and mature all the grains, vegetables and fruits,

that are now grown in any part of the world. And the time will come when the citizens of California will have as much cause to complain of too much rain as those who are now here, have of too little rain.—*Placerville Mountain Democrat*, July, 1860.

A BRIEF HISTORY, IN THREE PARTS, WITH A SEQUEL.

Part I.—Love.

A GLANCE—a thought—a blow—
  It stings him to the core.
A question—will it lay him low?
  Or will time heal it o'er?

He kindles at the name—
  He sits and thinks apart;
Time blows and blows it to a flame
  Burning within his heart.

He loves it though it burns,
  And nurses it with care;
He feels the blissful pain by turns
  With hope and with despair.

Part II.—Courtship.

Sonnets and serenades,
  Sighs, glances, tears and vows,
Gifts, tokens, souvenirs, parades,
  And courtesies and bows.

A purpose and a prayer;
  The stars are in the sky—
He wonders how e'en Hope should dare
  To let him aim so high!

Still Hope allures and flatters,
  And Doubt just makes him bold;
And so, with passion all in tatters,
  The trembling tale is told.

Apologies and blushes,
  Soft looks, averted eyes,
Each heart into the other rushes,
  Each yields and wins a prize.

Part III.—Marriage.

A gathering of fond friends,
  Brief, solemn words, and prayer—
A trembling to the fingers' ends,
  As hand in hand they swear.

Sweet cake, sweet wine, sweet kisses,
  And so the deed is done;
Now for life's woes and blisses
  The wedded two are one.

And down the shining stream
  They launch their buoyant skiff,
Bless'd, if they may but trust Hope's dream,
  But ah! Truth echoes "if!"

The Sequel.—"If."

If health be firm—if friends be true—
  If self be well controlled—
If tastes be pure—if wants be few,
  And not too often told—

If reason always rules the heart—
  If passion own its sway—
If love, for aye, to life imparts
The zest it does to-day—

If Providence, with parent care,
  Mete out the varying lot—
While meek contentment bows to share
  The palace or the cot—

And, oh! if faith, sublime and clear,
  The spirit upward guide—
Then blessed, indeed, and blessed fore'er,
  The bridegroom and the bride.

PRE-HISTORIC REMAINS OF THE MISSISSIPPI VALLEY.

DE HAAS, writes to the St. Louis *Democrat:* The mounds on the American bottom, in Illinois, are comprised in two separate groups, constituting one grand and imposing system. They number nearly two hundred, including those on the adjacent bluff. They are of various sizes and shapes, rising from the scarcely distinguishable elevation to the imposing structure of over ninety feet. They are conical, ellipsoidal, truncated, square, and tetragonal. They are entirely of earth, and raised with as much regularity and symmetry as a potter would mold a model in clay. They have all been formed from material taken from the adjacent plain or bluff—a vegetable mold, clay, and soil, and present a marked mottled appearance, identical with the mounds in the Ohio valley. Every mound has been elevated by human labor, and he who denies this self-evident fact simply acknowledges himself ignorant of the subject. The evidence, externally and internally, position, structure, character, and contents, clearly, positively, and unmistakably prove this.

The tumuli under consideration were probably all erected by the same people. We can not here, as in the case of the ancient Britons, determine from the character of the mounds the type of race they cover. There, the long, or elliptical barrow contains the long or *dolichocephalic* head; and *per contra*, the round or conical barrow contains the round or *brachycephalic* head. Here, we have the long and round mounds, but not human crania of corresponding type confined to those forms. We have here the semi-prognathus and pyramidal heads, but not confined to any particular form of mounds.

The fictilia from these western mounds consists of distinct qualities. One is fine, compact, case-grained, kiln-burned, painted, and tastefully ornamented, molded for a breccia composed of clay, and proved much skill. The other is

coarse, rude, of irregular thickness, sun-dried, ornamentative without taste, and composed of clay and small rhomboidal fragments of white epathic carbonate of lime, and some of simple clay. Some of the finer quality occasionally shows a polishing or glazing, leaving minute striæ, as if done with a tuft of grass dipped into a *barbotte*.

In making some excavations on the plain, a short distance west of the large mound, I discovered large quantities of pottery in connection with human remains. Some of them were rude and quite heavy. One was clearly a cinerary urn.

The implements, ornaments, and weapons in stone, indicate two classes—one representing the *palacotethic*, or undressed stone age; the other the *neotithic*, or polished stone age, of Sir John Lubbock. Some of the specimens of the finer quality are of exquisite skill and workmanship. They are of porphyry, hornblende, granite, serpentine, nephrite, and the hardest varieties of amphabolic rock.

One of the most interesting classes is agricultural. They are unlike any implements or utensils in store, found in the Ohio valley, or any other part of the country. They were undoubtedly used in tilling the soil. One represents the modern hoe, and our domestic implement is but little improvement on that of the mound builders. A specimen before me is of limpir quartz, of faultless workmanship. Their smaller quartz weapons are very fine; ranging from the common hornstone up through all the varieties to the present chalcedony. The celts or axes represent an extensive class, and are of almost every style and finish. Some are very large, weighing over ten pounds. A granitic implement far surpasses these in size, some weighing over twenty-five pounds. The use of this was probably to dress hides or crush corn. Their mortars and pestles have been recovered, and their pipes, discs, and porphyritic rings for games.

The household goods—*lares* and *penates* of a people forever lost—are among the contents of mounds added to the fine collection of early art which I have made in this interesting region.

The ornaments with which they decorated their persons, the weapons with which they fought, the implements with

which they slew their game, and the vessels with which their domestic board was served with viands, have all been recovered, with a large number of miscellaneous articles in stone, which constitute, with those from other antiquarian localities, one of the most extensive and valuable collections of early American art yet made.

One object sought in these researches is to make a full collection of ancient art, representing the archæology of the northern division of the western continent.

IN VACATION.

The sun has marked me for his own;
I'm growing browner day by day;
I can not leave the fields alone;
I bring their breath away.

I put aside the forms of men,
And shun the world's consuming care.
Come, green and honest hills again!
For ye are free and fair.

How wonderful this pilgrimage!
On every side new worlds appear.
I weigh the wisdom of the sage,
And find it wanting here.

I crave the tongues that Adam knew,
To question and discourse with these,—
To taunt the jay with jacket blue,
And quarrel with the bees.

To answer when the grossbeak calls
His mate; to mock the catbird's screech;
The sloven crow's, with nasal drawls,
The oriole's golden speech.

Now through the pasture, and across
The brook, while flocks of sparrows try
To quit the world, and wildly toss
Their forms against the sky.

A small owl from the thistle-tops
  Makes eyes at me, with blank distrust,
Tips off upon the air, and drops,
  Flat-footed in the dust.

The meadow-lark lifts shoulder-high
  Above the sward, and, quivering
With broken notes of ecstasy,
  Slants forth on curved wing.

The patient barn-fowls strut about,
  Intent on nothing every one.
A tall cock hails a cock without,
  A grave hen eyes the sun.

The gobbler swells his shaggy coat
  Portentous of a conquest sure;
His *houris* pipe their treble note,
  Round-shouldered and demure.

The clear-eyed cattle calmly stop
  To munch the dry husk in the rack;
Or stretch their solid necks, and crop
  The fringes of the stack.

But night is coming, as I think;
  The moving air is growing cool;
I hear the hoarse frog's hollow chink
  Around the weedy pool.

The sun is down, the clouds are gray,
  The cricket lifts his trembling voice.
Come back again, O happy day,
  And bid my heart rejoice!

CHARLES WARREN STODDARD.
in *Atlantic Monthly*, September, 1868.

THE CLIMATE OF CALIFORNIA.

THERE is a city in South America—Bogota, the capital of New Granada—where the temperature varies all the year

round only about two degrees from 68 degrees; but, in sight of Bogota, in the valley of the Magdalena, the climate is always tropical and oppressive. We read of this and wonder; and yet there is a Bogota in every mountain county of California, from which, to the fierce temperature of the foot-hills, the distance in a straight line is not more than twenty miles. To-day the thermometer will mark 105 degrees at Murphy's, in Calaveras; at the Big Trees, not more than ten miles in a direct line from Murphy's, the mercury will not rise above 78 degrees. The altitude of Murphy's is about 2,000 feet above the level of the sea; of the Big Trees, 4,500. It is the 2,500 feet of difference in altitude that causes the difference in climate. There are cozy little valleys nestled amid hills where the pale-green maple, the dark-green alder, the slender hazel, the broad-leafed black-oak, and the tall and singing pine, all meet and dwell together in harmony, and where we think the climate of Adam's Eden must be nearly realized. There are valleys, not more than twenty miles east of the line of the Big Trees, where a winter climate is perpetual.—*Stockton Independent.*

TO THE LOADSTONE OF MY LIFE.

BY A TELEGRAPHER.

My dearest love, when last you paid
That telegraphic bill,
The touch of thy soft hand gave me
A strong *electric* thrill.

A *spark flashed* from thy beaming eye,
Thy voice with music vocal;
I thought how great a bliss if I
Could have thee for my *local.*

And when through hours of toil I've bent,
How sweet a boon 't would be
To know of your *kind, tender* heart
That I retain the *key.*

Should Cupid's *current e'er grow weak*
(I say it without flattery),
I'd turn me to thy rosy cheek,
And just *renew my battery.*

And if, perchance, our hearts grow cold,
I'll tell thee how we'd work it—
With hand in hand, and lip to lip,
We would complete love's *circuit.*

Then murmuring soft nonsense o'er,
And quaffing kisses sweet,
Quick versed in telegraphic lore,
You'd whisper, "*Love, repeat!*"

At last, when asked by surpliced priest
To honor, love, obey,
I'd be content to hear thee lisp,
Those magic words, "O. K."

Then all the joys of married life
Would cluster round us thick;
With credit at the grocery shops,
We'd always "*go on tick.*"

With temper mild and never naughty,
Bright as the sky, though blue it be,
We'd ne'er be troubled (like De Sauty)
With *broken continuity.*

Thus along life's stream we'd glide,
The *current* smooth and *steady*,
And when we're *called* to rest above,
We'd answer, "*Ay, ay—ready!*"

AMUSING EXPERIMENT ON RATS.

AN amusing experiment on rats was recently perpetrated in a mercantile house in Petersburg, Virginia. Two of the animals had been trapped, and it was decided to try the

effect of whisky upon them. Forty drops were administered to them by force, and the result awaited. They were placed in a wide, deep box, into which some gravel had been thrown. A saucer of whisky was placed therein. For awhile all was silent, each rat having seated himself in a corner, where he remained as morose as a rat could be. By and by, however, the liquor began to work. The rats began to smile and play with their tails, then to jump up and squeak, then to fall down and roll over. Finally, one of them found the saucer, and, with the peculiar curiosity attaching to the race, dipped his nose into it. He drank, and the noise of his drinking brought his companion to his side. They drank as though they were really fond of the stuff, and, it is estimated, took more than twice forty drops. And now they got glorious. They kissed each other. They wrestled and played about. They revisited the saucer, and got mad over it; and a rough and tumble fight ensued, which lasted until both were exhausted. Then they remained for awhile, each with a paw to his nose, grinning at the other. Finally, both fell asleep, and, while they were gloriously unconscious, a terrier was dropped before them, and the curtain falls.

A TOUCHING TRIBUTE TO WOMAN.

SAY, what is lighter than a feather?
Dust, my friend, in driest weather.
What's lighter than the dust, I pray?
The wind that wafts it far away.
And what is lighter than the wind?
The lightness of a woman's mind.
And what is lighter than this last?
Ah, now, my friend, you have me fast!

THREE WORDS OF STRENGTH.

THERE are three lessons I would write—
Three words, as with a burning pen,
In tracings of eternal light,
Upon the hearts of men.

Have Hope. Though clouds environ now,
And gladness hides her face in scorn,
Put thou the shadow from thy brow—
No night but hath its morn.

Have Faith. Where'er thy bark is driven—
The calm's disport, the tempest's mirth—
Know this—God rules the hosts of heaven,
The inhabitants of earth.

Have Love. Not love alone for one,
But man, as man, thy brothers call,
And scatter, like the circling sun,
Thy charities on all.

Thus grave these lessons on thy soul—
Hope, Faith, and Love—and thou shalt find
Strength when life's surges rudest roll,
Light when thou else wert blind.

SCHILLER.

ON THE BEACH.

On the smooth beach, one calm delicious day,
We watched the breakers chase the hours away;
The golden sun poured his full radiance down,
The white surf rimmed the sea—a silver crown;
We heard the pulses of the ocean beat,
Its throbbing life-blood dashing at our feet,
We traced our names in silence on the sand,
One with a rough, one with a soft white hand;
One, traced by beauty in the flush of life,
One, by a man storm-scarred in sterner strife;
And round them Memory, from her treasures, cast
The brilliant sea-shells of the buried past;
Two little children sent their ships to sea,—
Where shall the harbor of their treasures be?

Washed by the waves, half-sunk in changing sand,
A skeleton wreck lay on the treacherous strand;
That shattered ship became a white-winged boat,
Once more upon the ocean waves afloat;

Two friends were wafted by the balmy breeze,
Into the summer of warm southern seas,
Time fled unnoted; every dreamy sense
Reposed in deep, delicious, dreamy indolence;
Earth's rugged landmarks faded out of view,
The sky and ocean, one expanse of blue;
The vault of sapphire bent to kiss the sea,
Like the pure eyes bent lovingly on me;
The blue waves, pouting, sought to taste the bliss
Pressed to my own lips in a burning kiss.
On, on we drifted, till an emerald isle
Bathed in the beauty of the tropics' smile,
Burst on our view, clasped in old ocean's arms,
Whose white lips kissed its never-fading charms.
Gladly my feet had trod the enchanted shore,
Her hand in mine, to go back nevermore;
But the fair wanderer who embarked with me,
Turned back our ship across the trackless sea,
Trimmed the white sails until we reached the strand,
And saw our names washed from the fickle sand.

Tell me, O silent, sullen, fathomless sea!
Wilt thou return my precious ships to me?
Or, wilt thou cast them wrecks upon the shore,
Bleaching like skeletons, forevermore?

ARCHÆOLOGY OF NORTH AMERICA.

THE northern continent of America affords, though it might seem otherwise, an extensive field for archæological research, and an excellent test of the true value of the theories which have been propounded as to the origin of civilization and of art in the eastern hemisphere. Historically, as well as geographically, the area is almost unbounded, and has been occupied, in all probability, from the remotest antiquity, by different nations, if not by different races of mankind, in various stages of social, political, and intellectual development. The ancient remains, many of which

are in a singularly perfect condition, considering the lapse of so many centuries, are calculated to impress the most stolid beholder with admiration and awe. Unlike the relics of antiquity in the Old World, they have suffered less from the vandalism of man than from the ravages of time. The advancing emigrant, and the retreating Indian—each in his turn—have contributed to their preservation; the one from economical, the other from superstitious motives. Their number is so vast, their distribution so unequal, and their character so diverse, as to render any attempt at a classification—in this place at least—a profitless task. From Guatemala to Upper Canada, and from the Atlantic to the Pacific Ocean, the surface is strewn with stupendous ruins of pyramidal temples and tumuli, intrenched camps and fortifications, walled towns and villages, amphitheaters and pictorial grottoes, embankments and bridges, towers and obelisks, wells and aqueducts, high-roads and causeways, gardens and artificial meadows; the greater part of which were designed, constructed, and maintained by numerous, intelligent, and skillful races of men who have long since disappeared from the several scenes of their labor, bequeathing to posterity no written, nor even a solitary traditional memorial of themselves or of their ancestors. Some portion of their history, nevertheless, may be dimly discerned by the light of analogy. But before speculating on their probable origin, or determining to what particular branch of the human family they belonged, or from whom they derived elementary instruction in the arts and conveniences of life, let us take a glance at their country, as it presented itself to the astonished gaze of the Spaniards at the commencement of the sixteenth century.

In that age, the continent of North America, so far as relates to its territorial divisions, its political circumstances, and the dispersion of its multitudinous families, differed less than might be supposed from its present condition. Then, as now, fixed communities and nomadic tribes divided the soil between them. In their respective modes of existence, the best of the inhabitants exhibited but an imperfect civilization, and the worst of them but a qualified barbarism; the

first were emerging from, and the second were sinking into, a state of social decrepitude and moral ruin. Nor is this the only instance of the verification in the New World of the maxim in the Old, that history reproduces itself. As in the nineteenth so in the sixteenth century, one great national confederation eclipsed all the surrounding principalities or kingdoms. The ancient Mexican League, including the several sovereignties of Anahuac, Tezcuco, and Tlacopan, occupied that pre-eminent position, and exercised that paramount influence, north of the Tropic of Cancer, which has since become the indisputable inheritance of the United States. Less intelligent and humane than the Acolhuans and Nahuatlacas, the founders respectively of Tezcuco and Tlacopan, but more warlike and ambitious than either, the Aztecas of Mexico assumed the lead in all military and aggressive enterprises, and were gradually extending their dominion, which already reached from the fourteenth to the twenty-first degree of north latitude, and from the Atlantic to the Pacific Ocean, when they were startled by the sudden apparition of the Spaniards. The story of their tragical conquest, as has been remarked, reads more like a fiction of romance than a chapter in the annals of mankind. But with that story, excepting so far as concerns the progress which the unfortunate Aztecas had made in civilization and the arts, we have little to do in this place. Their conquerors, in penetrating Central America, and reaching the elevated regions of Anahuac, were not less astonished by the multitude of stately and populous cities than by the wealth and magnificence of the tropical landscape. Both were a surprise, and surpassingly beautiful to the hardy invaders. "When I beheld the delicious scenery around me," exclaims that honest old soldier, Bernal Diaz, "I thought we had been transported by magic to the terrestrial paradise. * * * Some of our men, who had visited both Rome and Constantinople, declared that they had not seen any thing comparable in those cities for convenient and regular distribution, or for numbers of people." Works of public utility, some built of brick and some of stone, were visible in every direction, many of which, in magnitude as well as in grand-

eur, rivaled the most celebrated structures of antiquity in the Old World. The terraced-pyramid of Cholula, in the sacred province of Puebla, which was crowned with an elaborately decorated *teocalli*, or "house of God," and which was built, it has been supposed, upon the model of the Temple of Belus, described by Herodotus, covered an area double that of the largest of Egyptian pyramids; but its altitude was greatly disproportioned to the vast extent of its base, being no more than 177 feet, or a third only of that of Cheops. The interior walls of the teocalli were adorned with curiously-wrought plates of silver and gold, profusely studded with gems. A much greater expenditure of wealth and ingenuity was bestowed upon the shrine of the tutelary god, whose statue, larger than life, was graved in the most durable stone, and painted in the most gorgeous colors. There was not a city or populous village within the confines of the Anahuacan territory, or in the provinces to the south of it, which could not boast of a temple more or less conspicuous for its magnitude and sumptuous embellishments. In fact, storied palaces of princes and nobles, each elevated on a series of artificial platforms, with magnificent flights of steps reaching to the summit; long ranges of scarcely inferior terraced buildings, with pillared façades fantastically carved, which were exclusively set apart for the Mexican priesthood; and gigantic lithic monuments, bearing the mystical emblems of Sabean, Phallic, and Ophite worship, met the gaze of the Spanish soldier whithersoever he turned himself.

But architecture was not the only art practiced by the ancient Mexican. He was equally skilled in metallurgy. Gold, silver, copper, lead, and tin were the five metals that his country produced, or that were known to him; and in manipulating these he was confessedly not inferior to the expertest craftsman in Europe. His tools for hewing the toughest timber, as well as for dressing the hardest rock, were made of copper alloyed with a small proportion of tin. He found in that composite metal an efficient substitute for iron and steel. His sculptured images, cut out of solid blocks of basalt, are marvelous specimens of manual

skill. Swords, knives, and other implements, requiring the keenest edge, were made of obsidian, a most difficult and intractable material of volcanic origin, which he split into the desired form with amazing dexterity. Long after the subjugation of his country by the Spaniards, he set little store by that metal the possession of which so many of our modern archæologists persist in making the sole criterion of a civilized condition. His skill and industry as a mechanic may be judged from a remarkable passage in Mr. Taylor's "Anahuac":—

"In the plowed fields, in the neighborhood [of Tezcuco], we made (says that gentleman) repeated trials whether it was possible to stand still in any spot where there was no relic of old Mexico within our reach; but this we could not do. Everywhere the ground was full of unglazed pottery and obsidian, and we even found arrows and clay figures that were good enough for a museum."

The Aztecas were likewise indefatigable tillers of the ground; and the East—and through the East the whole world—is indebted to them for the successful cultivation of the maize and cotton plants. Their famous floating *parterres*, on the great lake of Tezcuco, bore witness to their singular taste and ingenuity as floriculturists and gardeners. Like the Egyptians, they had contrived a pictorial method of recording events, and so of perpetuating among themselves, if not for the advantage of alien posterities, the chief particulars of their history. It can not be said with certainty, but the fact is far from improbable, that they had invented a phonographical as well as a hieroglyphical character. They had even made some advancement in the physical sciences, especially in astronomy; and had a solar year with intercalations more accurately calculated than that of the Greeks and Romans. But neither the greatest progress in the mechanical arts and physical sciences, nor the possession of the most ingenious and equitable code of laws, and its due administration, will compensate for the absence of a humanizing, if not spiritualizing, system of religion. The bloody ritual of the Aztecan priesthood constitutes by far the foulest page in the humiliating register of superstition

and fanaticism. The rites of Moloch and Astaroth appear merciful when contrasted with those of Mexitli and Teoyaomiqui, whose abominable altars, from sunrise to sunset, reeked with the fumes of human gore. The victims were usually captives taken on the battle-field. The effects of national depravity, unhappily, are not to be restricted to the limits of the country within which it originates; on the contrary, like circles made by the falling of a stone on a pool of water, they continue to expand with irresistible momentum until the area—be it small or be it large, an island or a continent—is completely overspread. Thus, to this day, the baneful effects of the former cruelty in Mexico are still widely felt on the northern continent of America. The untutored descendants of those people whom the Aztecas so relentlessly pursued—we allude to the unsettled and degenerate Indians wandering over the vast deserts to the west of the Mississippi—still retaliate upon their neighbors the shocking barbarities which their ancestors endured; and were any additional evidence required in support of the true origin of the lingering practice, it is conveyed in the fact that they likewise excuse themselves with the plea of a duty no less sacred than urgent. The Old World adage, "we live more by example than by reason," expresses in brief the moral status of every savage community.

The national records of the Aztecas, confirmed in a great measure by the observations of their conquerors, establish several most interesting and most important facts in the natural history of civilization. When first confronted by the Spaniards they had been seated in Mexico rather less than one hundred and fifty years. Toward the close of the twelfth century of our era, they had migrated from a spot traditionally known as Atzlan, or "the country of water;" most likely the territory inclosed within the angle formed by the junction of the Rio Colorado and the Rio Gila, at the head of the Gulf of California. They did not reach the table-land of Anahuac, however, until the year 1324. No date in their history has been better established than this. We have an indubitable instance, therefore, of a nomadic horde suddenly suppressing the instincts of their nature, re-

linquishing the habits of savage life, becoming a permanently settled people, developing a capacity for political organization, raising stupendous piles of brick and stone, constructing and embellishing innumerable cities, cultivating the arts and sciences, and making such advancement in astronomy more particularly, as not only to rival but to surpass that which was made by the most enlightened nations of antiquity in Asia and Europe. And all these astonishing results are crowded within the comparatively limited space of a century and a half! We are left in no doubt, moreover, whence this extraordinary people, and the tribes associated with them, derived much of their civilization, and a knowledge at least of architecture—facts which are quite as remarkable as those just mentioned. The Mexican empire was built upon the ruins of that of the Toltecas, who, in the eleventh century, had been overwhelmed by the successive calamities of war, famine, and pestilence. Like the Aztecas, the Toltecas had traveled originally from the northwestern parts of the continent; and, according to the local historians contemporary with the first Spanish adventurers, had occupied the vale of Anahuac from the seventh century of our era. They are said to have been established in New Mexico from 300 B.C., which we may observe, by the way, is the earliest assumed date in the annals of the aboriginal Americans. The origin of the Toltecas is shrouded in mythological fable. It was traditionally held that their ancestors had migrated from "the distant East, beyond immense seas and lands." They had wrested the territory of Anahuac from a powerful nation called the Ulmecas, or Olmecas, who, in their turn, had displaced the Quinámes, a fabulous race of giants. The light of documentary history just reflects the declining years of the Toltecan dominion, and discloses to our view the pre-eminent position which they held in the eyes of their contemporaries, and the favorable influence that they exercised over them. Of all the ancient American nations of whom tradition or history has preserved any notice, these people were by far the most civilized and ingenious. Humboldt has designated them the Pelasgi of the western hemisphere, and Prescott states that their tribal appellation is

synonymous with architect. The survivors of their race, when driven from their old habitations, retreated toward the Isthmus of Panama, and scattered themselves about Yucatan, Guatemala, and Nicaragua, where their presence may be traced to this day in the language of the people and in the numberless ruins of once beautiful structures.

Spanish intolerance in the New World, at the period of the conquest, which involved the loss of so many precious memorials of a primitive people, and Spanish jealousy in subsequent times, which denied the foreigner access to, and almost a glimpse of, the vanquished territories, will abundantly account for the ignorance of Europeans in general, and of such authors as Robertson in particular, as to the real condition of America in the pre-Columbian ages. For his well-known history, that admirable writer was exclusively dependent upon Spanish authorities; whose national, to say nothing of their ecclesiastical, prejudices (nine-tenths of them were churchmen) would necessarily make them reluctant if not treacherous guides. Hence he was led to believe that, excepting within the limits of the two great monarchies of Mexico and Peru, the whole continent of America had been, from the earliest epoch, the abode of uncivilized men. "There is not," says he, "in all the extent of the vast empire a single monument, or vestige of any building, more ancient than the conquest;" and again: "The inhabitants of the New World were in a state of society so extremely rude as to be unacquainted with those arts which are the first essays of human ingenuity in its advancement toward improvement." When the historian thus expressed himself he was totally ignorant not only of the existence of those remarkable edifices in Central America which have been recently exhumed from the depths of tropical vegetation—all incontestably proving that the builders of them, instead of being, as he too hastily concluded, a savage and uncultivated people, had made, on the contrary, very considerable progress in civilization and in the higher branches of art—but also of those much more ancient monuments, which, according to local report, "may be counted by thousands and by tens of thousands," and which are to

be found, for the most part, on the alluvions of the Mississippi and Missouri, and, to a lesser extent, in the States of the Union bordering on the Gulf of Mexico. In those States, more especially, he who runs may read one of the earliest chapters in the history of his species after the Dispersion; or find, if he will, the very counterpart of—

> "The fallen towers
> Of Babylon, the eternal pyramids,
> Memphis and Thebes, and whatsoe'er of strange
> Sculptured on alabaster obelisk,
> Or jasper tomb, or mutilated sphinx,
> Dark Ethiopia on her desert hills
> Conceals."

For the western hemisphere can boast of an Egypt as well as the eastern.

The aboriginal monuments of North America, including those of Mexico and of the provinces to the south of it, are clearly referable to three distinct and possibly, very widely separated epochs in the pre-Columbian history of the continent. For conveniency's sake we shall designate these epochs respectively the earliest, the intermediate, and the recent; and agreeably with what has gone before, we shall invert the order of this sequence. By this arrangement we shall hope to establish the general fact of mankind in the New World—whatever may have been their destiny in the Old—never having extinguished that spark of divinity which was originally kindled within them; or, in other words, wholly lost that civilization which they had inherited from their progenitors, the first wanderers from the northern regions of India, that "real primordial land" (as Schlegel emphatically calls it), where every thing combines to point out a common origin of our faith, our knowledge, and our history. By "civilization" we simply mean in this place, the converse of barbarism. There have been, throughout all time, divers phases of civilization, as well as divers populations in the world—an agrestic as well as an urban civilization; and the progress achieved, in either case has depended as much upon local resources as upon

the idiosyncrasy of the people. To what degree of civilization the North American nations in pre-historical times had attained, can only be judged analogically, or by comparing their structural monuments and relics of art with those of the most cultivated people of antiquity in the Old World. In the new edition of Mr. Fergusson's History of Architecture, which is a monument of erudition, taste, and ingenious reasoning, the author has devoted a chapter to the architectural remains of the early American peoples, and has shown that whatever can now be known of those extinct and unrecorded races must be derived from a searching comparison of the structures they left behind them. There, and there alone, are still to be found the vestiges of their passage on the earth; and it is from these mute witnesses that we have chiefly extracted the evidence that we are about to lay before our readers.

At the period of the conquest by Cortes, the valley of Anahuac, although recognized as the chief seat of political authority on the northern continent of America, was not the center of civilization. The people of the southern provinces, from Yucatan and Panama, were much more refined and ingenious than their unscrupulous suzerains, the Aztecas, with whom the keen-sighted Spanish conqueror, when he was ennobled by his sovereign, and permitted to select a territory for himself, cast in his lot. Their magnificent architectural remains have been made known to Europe by the able pens of Messrs. Stephens and Norman and the pencils of Messrs. de Waldeck and Catherwood.

The first and last named gentlemen, in their irregular wanderings together about Central America, discovered no less than fifty-four ancient cities, and incidentally heard of many others, situated in deserts and forests, which they were unable to explore. The most interesting monument of this extinct civilization were found at Uxmal or Itzlan, Palenqué, Ocosingo, Oajaca, Santa Cruz del Quiché, and Copan. The wildest opinions have been expressed as to the supposed antiquity of these remains, the principal of which consist of temples, palaces, and other imposing structures, usually elevated upon pyramidal mounds, or upon vast

terraces of stone or of sun-dried brick, now all in various stages of decay. M. de Waldeck supposes the ruins of Palenqué, in Chiapas, to be not less than 3,000 years old; and some antiquaries have even relegated them to an antediluvian epoch! Other travelers who have also visited them, lend no countenance whatever to such extravagant conclusions as these. As Mr. Fergusson long ago observed, in a climate so fatal as that of Central America to the durability of any class of buildings, it is obvious that those still in existence can not belong to a very remote era. The presence of timber in most of them is conclusive on this point.

The period within which we are disposed to limit the building of the Central American edifices ranges from the first to the seventh century of our era. The interior arrangement and decorations of some of the temples appear to indicate an Asiatic source, and afford, therefore, a clue to an approximate date of their erection. In the order of time, the ruins of Copan, in the province of Honduras, abounding with monolithic statues of Indian deities, are probably among the oldest of the series; those of Santa Cruz del Quiché, in Guatemala, which are in the most dilapidated condition of any, rank next to them; then follow those of Uxmal, in Yucatan, where neither an idol nor carved tablet is to be seen; while those of Mitlan in Oajaca, and of Palenqué in Chiapas, the former conspicuous for their Cyclopean masonry, and the latter for their elaborate ornamentation, are among the most modern of the series. Want of space precludes our entering upon any particular description of these and similar interesting vestiges of antiquity which are so lavishly scattered over the entire surfaces of Yucatan and Central America. We can do little more in this place than refer our readers to the admirable delineations of the most perfect of them by Mr. Catherwood, which that gentleman published in this country a few years ago; and to the sumptuous work of M. de Waldeck, which is still in progress. The several structures differ, of course, in various minor details, but the striking affinities observable in all of them betoken a common origin. "It is curious," says Mr. Fergusson, although he is no im-

plicit believer in the transmission of races, "that as we advance eastward from the valley of the Euphrates, at every step we meet with forms of art more and more like those of Central America." Von Humboldt was the first, we believe, to mark the curious points of resemblance between many of the architectural remains in the New World and the most ancient of them in the Old; but he was much too cautious a *savant* to commit himself to any positive theory in the matter in the absence of better illustrations than Mexico alone afforded him. Had he been permitted, however, to penetrate the interior of Central America, and to gaze upon

> "———the ruined temples there;
> Stupendous columns, and wild images
> Of more than man: where marble demons watch
> The Zodiac's brazen mystery, and dead men
> Hang their mute thoughts on the mute walls around,"

his shrewd suspicions regarding their true origin would have been abundantly verified—in a word, the conclusion would have been forced upon him that many of the teocallis, or sacred edifices, with all their fantastical appendages, were identical with the B'hudist temples in the southern parts of India, and in the islands of the Indian Archipelago, And this fact, as before intimated, gives us a clue to the age in which one at least of the most modern of them was built. The great temple of Palenqué so closely corresponds, in its principal details, with that of Bóro-Bódo in the province of Kedú, in the island of Java, as to place beyond all reasonable debate the common purpose and origin of both. Both are elevated on a series of graduated platforms or terraces, and are reached by successive flights of steps facing the cardinal points; the chambers in both are disproportionately small, with no apertures, excepting the doorways, for the admission of air and light; their curved ceilings, formed of stones overlapping each other triangularwise, and constituting what is known as the Cyclopean arch, are precisely alike; the walls of both are adorned with mythohieroglyphical tablets, in which the head of the Asiatic

elephant is conspicuous, the meaning of which has yet to be deciphered; and lastly, in the sanctuaries of both, B'huda is represented in colossal dignity, seated cross-legged upon a couch or throne sustained by crouching leopards, and benignly receiving an offering of fruit and flowers from a priestess who is kneeling before him. Mr. Squier, one of the most distinguished archæologists in the States, while admitting that coincidences of this kind, "extending to the ornaments of the Indian and Central American temples, monstrous heads and symbolical figures, might be greatly multiplied," yet doubts whether the religion to which they belonged can be properly regarded as derivative. In our judgment, the several features above described are much too close and exact to be accidental; they denote the successful establishment of B'hudistic worship in both countries, and probably about the same time. A comparison of certain dates and concurrent events will considerably strengthen this supposition, if not confirm it. It is well known that the milder religion of B'huda was introduced into Java at a comparatively recent period, namely, about A. D. 450; and, according to the local tradition, the famous temple of Bóro-Bódo was built in the sixth century of the Javan era, which is seventy-five years in arrear of our own. Now the last-mentioned date synchronizes with two most important events in the histories respectively of the eastern and western continents. It was then that the first of the long series of religious wars between the Brahmins and B'hudists occurred, and which ultimately resulted in the defeat of the latter, and their expulsion from the soil of Hindostan; and it was then likewise that various tribes, bigoted followers of Teoyaomiqui, of whom the implacable and sanguinary Kali of the Hindoos was the prototype, were successfully impelled forward from the northwestern deserts of North America, and eventually established themselves and their merciless creed in the valley of Anahuac. If, as the Abbé Clavigero calculates, the Toltecas did not abandon the last-mentioned territory, and pass into the provinces to the south of it, later than A. D. 1051, the age of the great temple of Palenqué, at the period of the Spanish conquest, would barely exceed

five hundred years; and the actual state of the ruins at this time will warrant no higher antiquity.

The Aztecas were an industrious, but not an inventive people. As before remarked, they derived their knowledge of the mechanical arts from the former occupants of Mexico, whose models they commonly adopted. In the matter of architecture they seemed never to have departed from the primitive types set before them; a circumstance which enables the archæologist to define, at least with presumable exactitude, their geographical limits. The route which they followed, from the west to the east, has been satisfactorily determined, as well as the several spots where they temporarily encamped. It is at the confluence of the Rio Colorado and the Rio Gila that they appear for the first time in American history. Not until they had reached the table-lands of Mexico did they finally abandon their nomadic habits, and become a civilized nation. This sudden and almost instantaneous revolution in their character and pursuits was owing, in all likelihood, to the attractive scenes of organized labor and domestic content that everywhere greeted them when passing, by invitation or otherwise, into the territory since known as New Mexico. That province was not then, as now, nearly depopulated and a sandy waste. At the period of the Spanish conquest, and for many centuries before it, the country was densely peopled, and studded with fortified cities, stone-built villages, and isolated dwellings, surrounded by fruitful orchards and cultivated meadows, and the whole connected by a network of highways. Successive droughts, the result of subterranean combustion, have converted very much of what was once a blooming garden into an arid wilderness. Since its glory has departed but few travelers have ventured into the province in question, and fewer still, so far as we are aware, have interested themselves in the singular remains of antiquity that are scattered along its now almost deserted valleys—remains that mournfully attest the former existence of a numerous and agricultural people but little inferior, probably, to any civilized race of which American history or tradition has preserved a record. Those remains, which

have been referred, but without the smallest show of reason, to the skill of the Aztecas, belong to our intermediate epoch. They exhibit no evidence of the mechanical ability which is so manifest in the construction of the temples and palaces and other works of Mexico. The "pueblos," or cities of the Indians, constitute a distinct type of architecture in the New World. The most celebrated of them are the *Casas Grandes*, the use and age of which so much perplexed Von Humboldt. It has since been suggested that they may have served as public granaries in pre-Columbian times. "Their origin," says Mr. Bartlett, "is shrouded in mystery."

"They were found (he adds) much as they now appear by the earliest explorers of the country, who were told by the Indians that they had been built 500 years before. One thing is evident, that at some former period the valley of the Gila, from this ruin [*i. e.*, the third of the Casas Grandes] to the western extremity of the rich bottom-lands now occupied by the Pimas and Coco-Maricopas, as well as the broad valley of the Salinas, for upward of forty miles, was densely populated. The ruined buildings, the irrigating canals, and the vast quantities of pottery of a superior quality, show that, while they were an agricultural people, they were much in advance of the present semi-civilized tribes of the Gila. But this civilization extended far beyond the district named. From information given me by Leroux, it appears that ruins of the same sort exist on the San Francisco or Verde River; and Captain Johnstone and Major Emory both saw similar evidences of wide-spread population far above the district in question."

Pueblos, in fact, are dispersed throughout the country which extends from the banks of the Rio Grande, in New Mexico, to the Gila, the Colorado, and the Vermilion Sea which divides California from New Spain. Some are so ancient that no Indian tradition of the present races makes any mention of them. Each served at once for a city and fortress. Sometimes they are discovered standing singly or in groups on the plains, and sometimes crowning the summits of perpendicular rocks. In the former case they are generally

built of *adobes*, or sun-dried clay; in the latter, of stone. The most remarkable are the pueblos Pintado and Wejegi, in the narrow pass of Chaco, situated between 35° 56′ 27″ north latitude, and 107° 46′ west longitude, for a description of which we must refer our readers to the pages of the Abbé Domenech (vol. i. p. 379).

As a general rule, the pueblo takes the form of an irregular pyramid, rising by gradations until it reaches an elevation of three or four stories. Old Spanish writers, contemporaries of Cortez, mention some pueblos that rose to the extraordinary height of ten stories. That of Pintado, both in altitude and extent, is comparatively small, much smaller indeed than that of the neighboring ruins of Wejegi. It boasts but of three stories. Each story, ten feet in height, forms a terrace and a step to the story above, which is attained by means of wooden ladders resting against the wall. The total length of the structure is 130 yards. There are fifty-three apartments on the ground-floor, all opening the one into the other. The miniature doorways constitute a problem in the archæology of architecture which has yet to be solved.

"The floors are formed of very rough beams 7½ inches in diameter, over which are transversely laid cross-beams of less size; above these is a layer of bark and brush wood, covered over with mortar. These beams show no mark of having been wrought by ax or saw; they rather appear to have been cut or broken off with some rude instrument more blunt than sharp."

From the fact of the mortar used throughout this building never having been tempered, we conclude it to be one of the most ancient monuments of the kind in that part of the continent. Elsewhere, as in the district washed by the Salt River and Gila, the interior walls of the ruined houses are usually stuccoed, or faced "with a kind of concrete, composed of pebbles and white earth, polished and whitened over," which would seem to be absolutely indestructible; whilst the beams of cedar, often a yard in diameter, bear marks of having been dressed with appropriate tools. Owing to the extreme rarefaction of the atmosphere in these

latitudes, all descriptions of timber are preserved for an indefinite term; cedar, more especially, hardens with age, till at length it becomes almost as solid as stone. When, therefore, house-beams of that wood are discovered exhibiting signs of decay, as in the ponderous ruins of the Casas Grandes, and in those near the mountains of San Pedro, a high antiquity of the buildings may be confidently inferred.

But old as the erections we have just instanced may be, there are others in these remote regions very much older. They are built of stone, and are doubtless the most primitive specimens of architecture in that material as yet discovered in the New World. Both in their external forms and internal arrangements, they closely resemble the most ancient edifices in Palestine, and such as are attributed to the Kelts in this country. Each structure is circular, being wholly built, too, of rounded stones laid in alternate belts or courses of large and small, and the interstices filled in with kneaded clay. Each, moreover, is encompassed by a solid rampart, sometimes constructed of stone, but more frequently of earth. In these primitive habitations, the apartments of which are numerous, spacious, and oftentimes circular, timber appears to have been entirely dispensed with. Lastly, there are invariably four entrances to each, answering to the four cardinal points. These curious ruins chiefly abound on the banks of the Blue, the Black, and the Salt rivers. On the last-mentioned they are more considerable than elsewhere. Tumuli, truncated pyramids, and wells now choked with débris and inclosed by walls, are also to be met with in the same localities. "Excavations among these majestic ruins," observes the Abbé Domenech, "have yielded abundant fragments of beautiful pottery, red, yellow, or black, striped, scolloped, and ornamented with brilliantly colored paintings."

There is another class of primitive structures in the same regions, which deserves something more than a passing notice, namely, the *Estufas*. Whether these are the adjuncts of the more modern pueblos, or of the more ancient circular "towns," seems questionable. They are found in close proximity to both, and were once used, it is supposed,

as places of meeting for political or religious assemblies. They partake very much of the character of the ancient *cryptæ* of Greece, Sicily, and Sardinia; and in some respects even surpass those of Mycenæ and Minyas.

"Properly speaking (says the Abbé Domenech) these *estufas* are round or square store-rooms, usually situated beneath the soil, like cellars; they are sometimes of large dimensions. The ceiling is supported by enormous pillars of masonry, or made of stout pine-trees. * * These edifices are generally devoid of door or window, and the only ingress to them is from an aperture at the top. The estufas of the Jemez were rectangular and one story only, being about eight yards and twelve inches wide, by thirty feet high. The interior walls of these edifices are always covered with hieroglyphical painting and various ornaments. There are pueblos which possess no less than four, and even six, estufas of different sizes. Among the ruins of Hungo-Pavi, near the beautiful plateau of the Mesafachada, one of these edifices is found which had at least four stories, buttresses in the interior, and walls a yard thick, by thirty feet in height. But, to judge from the rubbish around them, they must once have been much higher. The estufas in the Pueblo-Bonito are sixty yards in circumference, and their walls are regularly formed of layers of small stones alternating with layers of large ones. Between the Great and Little Colorado there is a chain of arenaceous hills, upon the summit of which are immense ruins of pueblos and estufas every way similar to those we have described." (Vol. i. p. 385.)

Even from our necessarily imperfect account of these interesting monuments in the distant West, which we have relegated to the intermediate epoch, the reader can not have failed to perceive that, if not strictly homogeneal in character, they have certain broad features in common. No similar structures are to be found elsewhere on the continent. Nevertheless, according to the traditions of the local Indians, the whole, without exception, resulted from the paternal solicitude, and, in some instances, from the talismanic powers, of Montezuma, the last and greatest of the Mexican

incas, whose memory they cherish with a childlike devotion, looking forward to the time of his reappearance in their midst with as much pride and confidence as did the Britons of old for that of King Arthur, when he will reassume both his legal and pontifical authority, expel the intruders from his scattered dominions, and restore every thing in them to its pristine condition. But after disintegrating the mythic element from the legends of the Indians, the residuum is generally of little worth. All the structures in question are manifestly much older than the Aztec dynasty. Between the simple round houses in the West and the stately edifices in Mexico there is no analogy whatever. The former, as we have already suggested, are the most primitive hitherto discovered in North America, and their prototype most probably was the ordinary tent of the Tartar. To this day that wanderer from the Asiatic heights not only arranges his camp in the form of a circle, but also surrounds it with a mound of earth, to preserve his family and his cattle from the depredations of neighboring tribes and the nocturnal attacks of wild beasts. The common dwelling of the Chinaman is constructed on a similar principle, and was derived, no doubt, from a similar source.

Those remains which we propose to refer to the earliest epoch (an arrangement, however, which is not strictly legitimate, much less scientific, but only adopted here for conveniency's sake) are much more diversified in their character, as well as more widely diffused, than the objects already pointed out. They comprise various descriptions of earth-works, stone, and other defenses, circuses, temples, obelisks, wells, embankments, artificial meadows, and high-roads; besides multifarious works of art, such as sculptures, masks, and statuettes in obsidian and clay, terra-cotta vases, ornaments for the person, implements of war, domestic utensils, tools, &c. Not the whole of these things exclusively appertained to the aboriginal colonists of North America; some belong to their immediate or near descendants, and others again to later descendants, who have not unfrequently added to, or otherwise modified, the labors of their predecessors—the earth-works more especially—to suit

their own particular requirements, or in accordance with the prevailing customs, religious and political, of their day. Obviously it is impossible in this place to describe at any length these manifold vestiges of long extinct populations, or even to complete the enumeration of them. We shall select, therefore, such only as will best serve, in our judgment, to illustrate the natural history of civilization in the New World anterior to its conquest by the Old.

Of the earth-works, the first both in order of time and of interest, are the mounds, usually raised on the alluvion of a lake, river, or stream, and sometimes covering from two to eight acres of ground, and exceeding one hundred feet or more in height. Their well-defined order of succession probably indicates the main routes taken by the primitive occupants of the country. It has been said that they may be counted "by thousands and by tens of thousands."* They vary so much in their external features and construction as almost to defy classification. Some are conical, some pyramidal, some dome-shaped, and others again in the form of animals, birds, and reptiles; a few resemble the figure of a man. They are scattered from Lake Erie to the Gulf of Mexico, increasing in number, size, and grandeur as they descend farther south. But they are nowhere so systematically arranged as in the great valleys of the Mississippi and Ohio. In the extreme western and northeastern States of the Union they are comparatively rare, whilst Canada is totally destitute of them. Contrary to the general rule in the Old World, the American mounds are not simply tumuli erected in honor of the dead; they were destined to various and very opposite uses; *e. g.*, they served for "high places," for temple foundations, for sacrificial altars, for observatories, as well as for sepulchers. Both anterior and subsequent to the Spanish conquest, many of them, more particularly in the Gulf States, were crowned with the palaces of caciques and other illustrious personages, which afterward served for their tombs or cenotaphs; and which accounts in

* It is proper to mention that, in the judgment of the most eminent geologists, the *stratified* mounds in the Western States are not the works of man, but the results of diluvial and fluviatile action.

some measure for their superior construction, as well as for their better state of preservation. In the provinces farther south, every known variety of the pyramidal mound has been discovered, from the more simple dagôba or tôpe,* common in Ceylon and Hindostan, to the loftier structure which in its primitive grandeur must have rivaled the most famous in Egypt. In the north, bordering on the great lakes, two very opposite types occur—namely, the dome-shaped and the emblematical, both constructed of earth. The first resembles in every respect the well-known Keltic barrows of this country, but are sometimes on a scale equal to those of the Scandinavian nations; the second are quite unique, and have been described not inaptly as "immense bassi-relievi carved on the soil by the hands of giants." Their origin is unknown, but the relics found within them betoken a very high antiquity. Locally each is called a *totem*, a corruption of *dodaim*, an Algonquin term signifying "town-mark." In the valley of the Ohio the mounds are in shape both conical and pyramidal, of larger dimensions and more symmetrical than elsewhere, excepting, of course, those in Mexico and other centers of more advanced civilization. Nevertheless, between the last-mentioned and the countless earth-mounds of Ohio there are such close analogies as to make it highly probable that both originated with the same people, although probably both were not erected in the same era.

For the purposes of historical deduction the sacred and sacrificial mounds are far more important than any others of the series. The former abound in Alabama, Georgia, and Florida, and in the great valley of the Mississippi, whilst the latter are restricted to no particular local-

* "The ancient edifices of Chichen, in Central America (remarks Mr. Hardy, the missionary), bear a very striking resemblance to the tôpes of India. The shape of one of the domes, its apparent size, the small tower on the summit, the trees growing on the sides, the appearance of masonry here and there, the shape of the ornaments, and the small doorway at the base, are so exactly similar to what I have seen at Anarajapoora (the ancient capital of Ceylon), that when my eyes fell on the engravings of these remarkable ruins I supposed that they were presented in illustration of the dagôbas of Ceylon." (*Eastern Monachism*, p. 222.) The date of the oldest of the Singalese dagôbas is 300 B. C.

ity, being met with almost as frequently in the north as in the south. "In some instances," observes Mr. Squier, "they are terraced, or have successive stages; but whatever their form, whether round, oval, octangular, square, or oblong, they have invariably flat or level tops of greater or less area." They are usually approached by imposing graded avenues, and encompassed by ramparts of earth or walls of Cyclopean masonry. Some of these temple-mounds are upon a truly gigantic scale. That, for instance, at Cahokia, in Illinois, is reported to be 700 feet long, 500 feet wide at the base, and 90 feet in height; its solid contents have been roughly estimated at 20,000,000 cubic feet. An immense tetragonal terrace has been reared by the side of it, which is reached by means of a talus. This mound is constructed with as much regularity as any of the *teocallis* in the south, and was originally cased with stone (some American archæologists maintain with brick), and surmounted with one or more buildings. The sacrificial mounds, which are peculiar to the New World, are much less imposing structures than the temple-mounds. Each is crowned with a symmetrical altar of burnt clay or stone, on which are deposited numerous relics, in all instances exhibiting traces of their having been exposed to the action of fire. They are still occasionally used in the religious ceremonies of the Indians encamped near their sites.

The art of castrametation appears to have been more extensively as well as more successfully practiced in ancient times by the nations of North America than by their more advanced contemporaries of the Old World. In no quarter of the latter, at all events, are there so many of such complicated military monuments to be found. From the Alleghanies to the Rocky Mountains a perpetual succession of vast intrenched camps and colossal fortifications, in earth and stone, follow the entire route. Every eminence is defended, as well as every delta formed by the junction of two streams. Redoubts and breastworks, ramparts and circumvallations, mounds of observation, and—anachronistic as it seems—*casemates* (as in the ruins of Marietta, near the mouth of the Muskingum) attest equally to the number,

the skill, and the industry of the population which constructed them. The most perfect and characteristic, as well as the most eminent of these stupendous defenses, are to be met with in the State of Ohio. A brief description of those in the county of Licking must here suffice:—

"Between the delta formed by the Newark and the Raccoon there is a perpendicular table-land about forty-five feet high, upon which regular fortifications of great extent are built. On the west side of the platform is an octangular fort inclosing a space of about forty acres, with walls about nine feet in height, and of equal breadth. This fort was entered by eight gates about five yards in width, each protected by a tumulus placed in the interior in front of the entrances. Two parallel walls lead to another circular fort placed southwest of the first, covering a space of twenty-two acres. Proceeding toward the south, you see an observatory that commands almost all the extent upon which these divers constructions are erected. Beneath the observatory a secret passage leads to the bank of the Raccoon. Farther to the right is a third fort, also circular, of about twenty-six acres, with an interior moat, out of which the earth was taken to form the walls of the fort, which are about twenty-five or thirty feet high. Two other parallel walls, very distant from each other at this place, run to the north, gradually diminishing their distance, and terminate at another fort, of quadrangular shape, twenty acres in extent. These four different forts are connected by rather low walls, and in the center is a shallow pond, covering a superficies of 150 or 200 acres, which probably afforded water to the flocks collected within the wide inclosure. Towers of observation are placed from distance to distance on the rising points of the plateau."

As already intimated, the objects of primitive art and utility which have been discovered in the ruins of buildings, or exhumed from the tumuli, are extremely miscellaneous in their character; differing according to the resources of the particular locality and the genius of the various natives. In the southern and northwestern provinces greater mechanical skill and superior taste are, as a

rule, perceptible in every description of handiwork. But two classes of objects are equally distributed over the whole continent; namely, ornaments for the person in copper, and various utensils in pottery. Copper, in its virgin state, obtained from the vicinity of the great lakes, and hammered into the forms of bracelets, anklets, axes, mauls, &c., appears to have been in very general use from an early period. Silver, lead, and iron were also worked, but on a limited scale; while brass and bronze, the former in the north and the latter in the south, were more extensively employed. A few years ago, the corpse of a warrior was discovered in one of the sepulchral mounds in the streets of Marietta, Ohio, with the remains of a baldrick or buckler, composed of copper, overlaid with a thick plate of "silver," lying across his breast. By his side were several broken pieces of copper tubing, "filled with iron rust,"—all, in fact, that remained of his scabbard and sword. A piece of iron ore, "which had the appearance of having been vitrified," was likewise found with them. In reference to this discovery, Mr. Squier remarks: "These articles have been critically examined, and it is beyond doubt that the bosses are absolutely *plated*, not simply overlaid, *with silver*." But we can hardly accept this conclusion. The effect described was produced more likely by chemical action; in other words, the metals had become partially amalgamated by the lapse of time. The presence, however, of oxydized steel or iron, as well as a specimen of "vitrified iron ore," in the same monument, is a much more interesting and important fact than the other; it betokens an advanced knowledge of metallurgy in very primitive times—a knowledge which must have been lost to succeeding generations, and long anterior to the age of the conquest. Iron was then absolutely unknown in the New World, excepting to one solitary tribe, established at the mouth of the La Plata, whose arrows and spears were tipped with it. But of all the aboriginal arts, that of pottery had attained to the highest degree of perfection. The terra-cotta vases have been compared in form with the choicest antique specimens in Europe. Those

found in the pueblos and wells of Mexico "still retain" (says the Abbé Domenech) "a very perfect varnish; they are ornamented with brilliant paintings, lines, scollops, frogs, butterflies, tortoises, and monkeys' heads." In the States to the east of the Mississippi they are almost equally excellent. Yet it has been questioned whether the inhabitants were acquainted with the potter's wheel. Besides a large assortment of cinerary urns, many of Old World types, arrow-heads of rock crystal, agate and silex, copper and stone axes, hatchets, gouges and chisels, knives in obsidian, perforated shells—some from the Gulf shores, and others from the southern coasts of India—the most ancient of the mounds have also yielded bracelets of brass, smooth and polished, rings and tubes of the same material, various ornaments for the person in silver, pipes of terra-cotta, slate, and steatite, rude sculptures in wood, and finer sculptures in more durable materials, representing tropical quadrupeds, birds, fishes, &c.

"The arts of taste and luxury may decline and perish through the violence, the revolutions, and disasters to which nations are exposed; but the arts necessary to life can not be lost by a people who has once known them." But this maxim of Principal Robertson has again been abundantly contradicted in the social history of the New World. All Spanish writers at the time of the conquest concur in describing the Indians generally as an intelligent and industrious, an inoffensive and religious people, as well in the interior as on the sea-board of the continent. Since the occupation of the northeastern provinces by the Anglo-Saxon race, the aborigines have degenerated so greatly from their primitive condition, and diminished so rapidly in number, as to make their total extinction within a very limited period a matter of absolute certainty. Two centuries ago, the population north of the confines of ancient Mexico amounted to 17,000,000 souls; it is now less than 2,000,000. Alcoholic liquors, epidemical diseases, and forced emigrations, have aggravated this frightful mortality. Yet, notwithstanding their deportation, and the various calamities incidental to it, many of the surviving

families of the red-skins have preserved in their new settlements some knowledge of the several arts that were practiced by their more fortunate ancestors. From the remotest times, agriculture appears to have been systematically prosecuted in the western hemisphere on the largest scale. The former vast populations on the upper valleys of the Mississippi and Ohio were probably dependent, in part, if not wholly, on the northern aborigines for their necessary supplies of corn. The configuration and extent of their "garden-beds," or farms, more especially in the States of Indiana, Wisconsin, and Michigan, are clearly discernible to this day, and are reported to be "laid out with all the neatness and symmetry of modern husbandry." Some of these "garden beds" cover an area of several hundred acres. Similar skill and industry are observable in the arrangement and cultivation of the lands belonging to the Delawares and other expatriated tribes on the banks of the Canadian rivers, and on the prairies of Kansas. So likewise with the primitive arts of pottery and glass-making, spinning and weaving, each of which is still extensively practiced by the Pimas and other tribes. Even to the present day, according to the report of the latest traveler among them, the Navajos, Tunis, and the Jemez, manufacture woolen and cotton tissues, which are highly prized by their white neighbors. There is no authenticated instance, we believe, of any Indian tribe or family having lapsed into "a state of nature." All have been more or less contaminated—and some, like the powerful and highly civilized Natchez, hopelessly ruined and degraded—by contact with the *Parthis mendaciores* infesting their country; but none, as yet, have sunk into absolute barbarism. Numbers excepted, they are now in many respects what they were in the sixteenth century. The conquest of the New World by the Spaniards, and its gradual occupation by successive races of white men, have checked the development, but not destroyed the primitive institutions of the Indians. For aught, indeed, that can be urged to the contrary, they have been stationary for a much longer period; and having been excluded from intercourse with the outer world, have become at length,

what we find them, a fossilized people, like that of China.

That the tribes of New Mexico inherited a civilization, more or less perfect, from extinct races which occupied that country before them, is an indisputable fact. No barbarous nation or nations could have executed the structural monuments that have been partially described, or have fabricated the multifarious works of art that are daily brought to light. Both the one and the other establish the early existence of a settled, industrious, and, to some extent, cultivated people. Whence, then, did the people derive their practical knowledge of the useful arts, and all the concomitants of ancient civilized life? Or, were these things really, as not a few imagine, of cis-Atlantic origin? That inquiry depends upon another and much more pertinent one—namely, were the primitive occupants of the northern continent of America immigrants or autochthones? Ethnographers, naturalists, archæologists, have attempted in vain to solve these problems; scarcely two of them are of the same opinion. As yet, no satisfactory hypothesis has been framed for general acceptance. Scandinavia, Gaul, Mauritania, Carthage, Egypt, Palestine, Hindostan, China, Mongolia, Siberia, and even Wales and Ireland, are supposed by some to have furnished their respective quotas toward the peopling of the New World; whilst others, including the late Dr. Morton, of New York, have maintained that the ancient population was a distinct type of humanity, indigenous to the soil. That celebrated craniologist, indeed, went far ahead of his contemporaries, and divided the aboriginal American races into two families—the Toltecan natives and the barbarous tribes—which differed, he contended, as essentially in their physical as in their moral characteristics. But since the publication of his well-known "Crania Americana," several important ethnological discoveries have been made elsewhere on the continent, in the south more especially, which completely sweep away his favorite, or rather sole, criterion of intellectual capacity—the development of the facial angle. The traditions of the Indians are much too vague and conflicting to resolve a doubt, much less to establish a theory,

in the matter of their ancestry. True, some of them—as, for example, the Algonquins, the Athapascans, the Iowas, and the Pimas, all widely separated from each other—uniformly point to the rising sun as the direction whence their forefathers came; but this motion may only indicate that they migrated from the eastern extremity of the continent, and not from the eastern hemisphere. In some instances, it undoubtedly means no more than that they are the boasted posterity or the adopted children of a divine personage, who is supposed to have emanated from the great luminary. The Quichés alone have preserved any thing like a definite account of their origin; and what makes this fact the more remarkable is, that they have been established in Central America from immemorial time. According to their earliest traditions, their progenitors traveled from the east, making a perilous journey through ice-fields and in protracted darkness; from which circumstance it has been inferred by the Abbé Brasseur de Bourbourg, and others, that they must necessarily have passed into the American continent either by some Arctic route, or by the Aleutian Isles in the depth of winter. To ourselves this tradition appears more curious than important. Visitors' tales of frost-bound seas, and of days without a sunrise, would naturally make a very deep impression upon the minds of a people confined within the tropics; who, in the course of time, would not unlikely associate such extraordinary phenomena with the personal history of their remote ancestors, and thus cast a thicker veil of mystery over it, or add a fresh marvel to it. Of the innumerable tribes or families of Indians still in existence, not one has any conception, much less any traditional knowledge, of a single country in the Old World. The geographical notions of the most intelligent among them are bounded by their own horizon. So far as is now known, the ancient Mexicans were the solitary exceptions to this rule. That they crossed over from Asia by the Aleutian Isles, about the eleventh century of our era, is a fact established as well by the declaration of the last of their Incas to his Spanish conquerors, as by a curious geo-

graphical chart of their migration preserved by Beturini.*

"Dim as these traditions are (observes Mr. Scholecraft), they shed some light on the thick historical darkness which shrouds the period. They point decidedly to a foreign, to an oriental if not Shemitic, origin. Such an origin had been inferred from the first. At whatever point the investigation has been made, the eastern hemisphere has been found to contain the physical and mental prototypes of the race. Language, mythology, religious dogmas, the very style of architecture, and their calendar, as far as it is developed, point to that fruitful and central source of human dispersion and nationality."

Whilst allowing there has been, for ages, a continuous emigration from the east of Asia—a fact, indeed, which is abundantly evidenced, as well by the physical characteristics of the Indian tribes occupying the mighty deserts in the north and northwest as by their manners, customs, and traditions, which so closely resemble those of the Mongols on the neighboring continent—it is, we think, equally demonstrable that other colonists, more civilized than wandering hordes of Tartars, found their way thither directly across the Pacific. In possession of the magnet, the most ancient of the Eastern nations boldly navigated the wide ocean in vessels of great burden; while as yet the nations in the west were timidly following the sinuosities of their coasts in shallow canoes or on ruder rafts. Some of the natives of India, like the "godlike" Phæacians whom Homer extols, were enterprising merchants and hardy mariners from the remotest antiquity. And so, no doubt, were the maritime populations of the Eastern Archipelago. If the oldest Japanese maps are to be depended on, their voyages formerly extended to Java, and on the north to Behring's Straits, and to the coast of America, which they called Foosang—a name by which it was also known to the Chinese long prior to the Christian era.

The oldest traditions of the Peruvians, the Brazilians,

* Mr. Fergusson holds that the Toltecs represent the *Esquimaux*, and that the Aztecs were Red Indians; but we can not discover any ground for this theory.

and the Araucanians (the aborigines of Valdivia), refer to the arrival in their countries respectively of illustrious strangers who came from afar, across the ocean. Only on the supposition that more frequent intercourse, by water, was maintained between the several nations of antiquity than is usually conceded by modern ethnographers and others, is it possible to account for the intermixture of races and the similarity of customs and institutions observable in different quarters of the globe. For example, families that physically approximate in type to the red-skins of North America have been discovered on the eastern coast of Africa, on the Island of Madagascar, on the South Australian continent, as well as scattered throughout Polynesia. And so, too, a very close conformity existed between the religious creeds and practices of the Etrurians and the Aztecas. In Italy and America human sacrifices were customary at the graves of illustrious chieftains. In the former country they were superseded by gladiatorial exhibitions—which were also introduced into Mexico—but, as in Etruria, were only used upon certain religious occasions. With both, too, the olive-branch was the symbol of peace. These analogies might be almost indefinitely extended. The calendars of the two people were nearly alike; the one calculated the length of the year at 365 days, 5 hours and 50 minutes, the other at ten minutes less. Like other nations of antiquity, they both believed that at the end of certain astronomical cycles periodical changes in nature would occur, and these were watched, therefore, with intense anxiety and alarm. The passage of the Pleiades across the meridian was announced to trembling multitudes in Mexico by the simultaneous lighting of innumerable beacon-fires on the observatories and hill-tops; and the reappearing of the great luminary in the morning, which confirmed their lease of life, was the signal for mutual congratulations and rejoicings. That momentous holiday corresponded with the festival of Isis, which, according to Herodotus, originated under precisely similar circumstances.

These parallelisms link the primeval history of America with that of the Old World, and the further we prosecute

them the evidence of the fact becomes proportionately stronger, till at length it is impossible to resist it. It was a maxim of the traveler Clarke, that, by proper attention to the vestiges of ancient superstition, we are enabled to refer a whole people to their original ancestors, with more certainty than by observations made upon their language; because the superstition is engrafted upon the stock, but the language is liable to change. As, therefore, with the Hindoos, Egyptians, Assyrians, Scythians, and their offshoots in Europe, so with all the tribes of the northern continent, from Nicaragua to the borders of Lake Superior, as well as throughout New England, the adoration of the sun, as the symbol of divine intelligence, has prevailed from the earliest epoch to this day.

"It may be traced in America (says Mr. Squier) from its simplest or least clearly-defined form, among the roving hunters and squalid Esquimaux of the north, through every intermediate stage of development, to the imposing systems of Mexico and Peru, where it took a form nearly corresponding with that which it at one time sustained on the banks of the Ganges and on the plains of Assyria."

Associated with Sabæan worship in former times was that of the lingham or phallus. This well-attested fact leaves little room for doubting that the aboriginal Americans derived their religious system in part from the East. The worship of the lingham was flourishing in the cities of Pomeco and Tlascala, in Mexico, at the period of the conquest; and Mr. Stephens observed at Uxmal, in Yucatan, certain ornaments upon the external cornice of several large buildings, the meaning of which was too plainly sculptured to be misunderstood. (*Travels*, vol. i., p. 181.) Nor was this revolting worship restricted to the territories just indicated; it appears to have been equally prevalent in the Gulf States, and as far north as Tennessee, where innumerable characteristic images have been plowed up; some formed of clay, and others carved out of a kind of amphibolic rock, the toughest of all stony substances.

Bearing in mind that the Oriental nations acknowledged originally but one object of devotion, the sun, with which

they presently associated the doctrines of the reciprocal principles of nature—doctrines which passed from India into Ethiopia and Egypt, thence into Asia Minor, and so into Greece and Rome—it is impossible to withhold from the inhabitants of the western hemisphere the coveted distinction of the highest antiquity, when we find their remote ancestors possessing the same system of theology, and adopting the same objects of worship, as the most ancient and cultivated people of the Old World. With almost all the aborigines, there is a proof of the existence of a belief in a Supreme Being; of an extensive polytheism, based in its origin upon the principle of divine emanations; of a belief in the immortality of the soul and its future state; and in the transmigration of spirits. The agreement between their ritualistic observances is equally remarkable. They, too, had sacred ablutions and fasts, sacrifices and expiatory self-punishments. Notwithstanding what has oftentimes been urged to the contrary, this congruity of religious ideas and practices in both hemispheres is of so decisive a character as to demonstrate a single primitive source. "We can not," remarks Sir William Jones, "justly conclude by arguments preceding the proof of facts, that one idolatrous people must have borrowed their deities, rites, and tenents from another, since gods of all shapes and dimensions may be framed by the boundless powers of imagination, or by the frauds and follies of men, in countries never connected; but when features of resemblance, too strong to have been accidental, are observable in different systems of polytheism, without fancy or prejudice to color them and improve their likeness, we can scarcely help believing that some connection has in immemorial time subsisted between the several nations which have adopted them."

There are now no means of determining at what particular epoch in the world's history the worship of the Lingham in India, of Peor-Apis in Egypt, of the Phallus in Greece, or Priapus in Rome, originated. But, according to the received chronology of the Bible, the worship of Baal-Peor prevailed among the Moabites 1450 B. C. (Numb. xxv. 3), or long before it was received into Europe. From the re-

mains which are still in existence, it may have passed into America at a time coeval with its introduction into Egypt. And this fact brings us to a still higher point in the primitive history of the continent.

Pyramidal piles of earth and stone are the peculiar marks by which we may discover the sites of the earliest settlements of mankind. The idea of such piles first appeared in the valley of the Euphrates, and culminated in the valley of the Nile. Whatever their forms, or wherever situated, in Asia or in Africa, one condition is common to them all: intended primarily for astronomical observatories, the sides of each accurately correspond with the cardinal points. This is also the case with the pyramids of America. In determining the epoch of the aboriginal migration to that continent, this remarkable co-extension or analogy again carries us back to that period when mankind, after being dissipated in the plains of Shinar, had re-established themselves in the different quarters of the globe. We have already referred to the magnificent pyramidal structures of Mexico; which excepting the shrines, were undoubtedly the work of the Toltecans, if not of an earlier people; but be that has it may, there are pyramidal ruins in Yucatan and Central America of a much more ancient date than any to be found elsewhere in the New World—so ancient, indeed, as to compare with similar monuments in Egypt, which are generally ascribed to the Memphite period. If, as we believe, the New World borrowed its designs for such structures, the aborigines must have traveled to the valley of the Nile for that purpose, rather than brought them from the shores of the Euxine and Caspian seas—a circumstance which, we may remark by the way, shows them to have been not only a less cultivated but a later settled nation than the Egyptians. Their conventional ideas of pictography and sculpture point to the same origin. According to Sir Gardner Wilkinson, no signs of progress from infancy to the more advanced stages of art are perceptible on the earliest monuments of Egypt: it was in after-times the Egyptian sculptors bound themselves so rigidly to conventional forms in the human figure. And so in America, the most ancient remains exhibit similar

characteristics. The same unalterable forms satisfied the devotion or the taste of successive generations; and consequently no improvement was made upon them. In the types of primitive art, the New World merely reflected the light of the Old. Hence, there was no warmth or creative power in it. Generation after generation servilely copied each other, but with gradually diminishing skill, or in almost the exact ratio of the distance which separated them from Central America and Yucatan, the earliest seats of civilization on the continent. That Africa, not the East, was the original source of their inspiration—perhaps about the age of the fourth Egyptian dynasty—may be inferred, partly from the peculiar situations, internal economy, and identical embellishment of the structures in question, and partly from the most primitive mode of sepulture observable in the immediate vicinity of them. The pile is invariably erected, for the purpose of sacred ablutions, in close proximity to water; either on the bank of a stream, or on the shore of a lake, or, in the absence of these, an artificial pond of proportionate dimensions has been excavated at its base; central apartments, for the preservation of the sacred elements, reached by descending galleries at a particular angle of declination, are found in all of them, as well as a secret communication with the river, lake, or pond, usually by means of a subterranean passage; and lastly, the neighboring valley or plain, as the case may be, is filled with innumerable catacombs, in many localities hewed out of the solid rock. The great pyramid on the plateau of Caernavaca, and known as Xochicalco, "the house of flowers," is reported to be scarcely distinguishable from the ordinary type of those in lower Egypt. Its position and configuration show it to be one of the group of adjacent hills. It is truncated and divided into four terraces.

"The intermediate slopes (says Mr. Norman) are covered with platforms, bastions, pyramidal and rectangular elevations and stages, one above another, all faced with large porphyry stones admirably cut, but joined together without cement; the perpendicular height is estimated to be from 300 to 380 feet high. The construction of the stories is irreg-

ular, like the Egyptian style of architecture; the lower parts inclining inward at an angle of 15° for a short distance, and then being surmounted with perpendicular courses projecting over the inferior portion. Upon the stories of this pyramid are many figures sculptured in relief, some representing hieroglyphic signs, and others, human figures, seated crossed-legged in Asiatic manner, and crocodiles spouting water."

Want of space precludes our pursuing these architectural analogies any further; suffice it to say, therefore, that the distinction between the earlier and later pyramidal temples of the New World is quite as remarkable as that between the ancient Egyptian structure and those erected by the Greek colonists under the Ptolemies. No doubt very many of the earliest piles have been modified in subsequent ages, to suit the particular necessities or tastes of the people; yet, in every such instance, the archaic type has been but slightly departed from, while the primitive example in the decorations without, always emblematical of the worship conducted within, has been scrupulously followed to the last. This is very apparent in the magnificent ruins of Yucatan; where, according to the unanimous reports of Mr. Stephens and later travelers in that wonderful country, the serpent entwined about the stem of the lotus is frequently repeated on the friezes of the temples; and at Palenqué, also, "a rectangular square is surrounded by cloisters * * and lighted by windows bearing the exact form of the Egyptian face."

It is proverbial among transatlantic travelers, that he who has seen one tribe has seen all; so closely do individuals of every family resemble each other, notwithstanding their immense geographical dissemination, and those differences of climate which embrace the extremes of heat and cold. And after devoting a lifetime to the investigation of their linguistic affinities, the late venerable Albert Gallatin arrived at the same conclusion. "However differing in their vocabularies," he remarks, "there is an evident similarity in the structure of all the American languages." From whatever land the aboriginal population of North

America proceeded—from Eastern Siberia, by the passage of Behring's Straits, or by the Aleutian Islands; or, which we conceive to be much more probable from the Bactrian heights or Hindostan, by the Indian and Pacific oceans,—the influence of their genius, mythology, and civilization has not wholly declined to this day. Hence, many have likewise been led to believe in the unity of the American races. Without impeaching the justice of this opinion, so far as it affects the existing tribes of native Red Indians, we can not but think that the aboriginal occupants of the soil disappeared long before the advent of the Spaniards. So far as is now known, the highest civilized races, at the era of the conquest, were restricted to the territory falling within the 10th and 25th degrees of north latitude, and to that smaller region which is watered by the Rio Colorado and the Rio Gila, and their tributaries. Every other portion of the continent, with one notable exception, was occupied by indigent and semi-barbarous tribes, widely scattered, and subsisting for the most part on the produce of the chase. The exception was Kentucky, bearing the ominous appellation of "the dark and bloody ground," which had long been shunned by every Indian with superstitious dread. According to the traditions of the locality, the now attractive banks of the Ohio had been the scene of a frightful carnage many centuries before the arrival of the Europeans. An entire nation, both physically and morally distinguished from the red-skins—"white men"—and who had been settled in the country from time immemorial, were unexpectedly assailed and overwhelmed by their enemies. The manifest incompletion of several of the monuments in the valley, betokens a sudden cessation of labor on the part of their constructors, and thus far confirms the terrible reality of the Indian legends. If those ill-fated people were not the true aborigines of the soil, they were undoubtedly connected with them, as may be inferred from the peculiarity of many of their structures; the relics exhumed from their tumuli; and, above all, from their primeval mode of sepulture.

In the absence of documentary proofs and positive evi-

dence it is extremely difficult, and often impossible, to determine the aboriginal migrations of a people. The primary immigrants of North America are no exception to this general rule. They arrived in the New World, we believe, by various routes and at various epochs. That comparatively narrow territory which stretches from the Pacific Ocean to the Gulf of Mexico, and which is so especially rich in stupendous and highly-decorated monuments, many of them bearing indisputable marks of the hoariest antiquity, was the first abode of the civilized nations. Those nations, as Mr. Taylor argues on *à priori* grounds, brought their civilization with them; it was not of indigenous growth; and the Abbé Brasseur de Bourbourg, who has labored long as a missionary in that part of the continent, as well as in the interests of ethnographical science, inclines to the opinion that the Mayas of Yucatan are their degenerate descendants. Thence population was diffused and radiated through the immense regions of the North. Almost the same combination of mounds, terraces, and pyramids is found throughout the valley of the Mississippi, as at Copan, Palenqué, and Uxmal, a fact which goes far to prove that the inhabitants of the interior derived their civil as well as their religious institutions, and such knowledge of the arts as they possessed, from Central America. The one, no doubt, was a modification of the other. By one of those refluxes which were so common in the early history of mankind, the tide of population returned to its original source, but by a circuitous or northwesterly channel; commingling in its passage with several streams of later immigrants to the continent by Behring's Straits or the Aleutian Isles. Hence the cause of those national changes and revolutions which may be faintly traced on the face of the most primitive monuments, and which are most distinctly portrayed on the more modern ones. The mild religious services of the first ages were superseded by the sanguinary ritual in vogue at the time of the conquest; political domination had completely succumbed to sacerdotal rule; the Inca added to his other functions those of supreme pontiff. Such, in brief, we take to have been the main courses of population in

North America. No doubt there were many intermigrations of more or less importance, the order of which, however, it is impossible to indicate. In connection with these we may remark, by the way, that no existing tribe of Indians, located east of the Mississippi, lay claim to the monuments surrounding them. According to their several traditions, they found them much in the same condition as they now appear, when their forefathers, centuries ago, "arrived from the West" and possessed themselves of the country. Old societies had utterly perished ages before, leaving posterity ignorant not only of the extent of their dominions, but also of their very titles. The Atlantic seaboard, from New England to South Carolina, would seem to have been but sparsely peopled till within a comparatively recent epoch. The remains in that long slip of territory are much less numerous than elsewhere on the continent, and, for historical deduction, almost valueless. Nearly the whole of them are the supposed works of the Iroquois and their affiliated tribes, and do not possess, it is reported, "an antiquity very far back of the Discovery."

Thus have we traveled over nearly the entire area of North America, and pointed out, in our necessarily hasty passage, the sites of the most important and interesting structural monuments pertaining, as we believe, to at least three distinct and widely separated epochs in the pre-Columbian history of the continent. These edifices show, partly from their architectural and other peculiarities, and partly from the relics of art discovered within and about them, whence sprang their authors, the aboriginal occupants of the soil. Their immediate origin is, and probably ever will be, an open question. It reaches back to the remotest period of human history, and is involved in a haze of fable. Nevertheless, their creeds, usages, and legends, whether delineated on the monuments or reflected by succeeding generations, uniformly point to an Oriental source; and this is all that can be averred with absolute certainty concerning them.—*Edinburgh Review*, July, 1867.

TRANQUILLITY.

ONE day brings on another day; one year follows another; let us take the time as it comes. The sources of all pleasures are in our heart; he who seeks them elsewhere outrages the Divinity. My projects, my desires, and my hopes never go beyond my bosom. Rivers roll rapidly to the sea, and enter it without troubling it; my heart is the same; all the events of the great world would not cost me a single care. Truth is my compass and moderation my helm. The clouds arise and the clouds descend in rain without causing me any inquietude. When they conceal the sun from me by day, I try to look at the stars by night. My clothes are made of common cloth, my food is coarse, and the thatch which covers my roof decays every year. But what would it have been to me to have been dressed out in silk to-day, and to have digested costly dishes? Golden roofs do not keep out sleeplessness and care; and were the country shaken by an earthquake, how easily I can gain my humble door! My patrimony is at the end of two arms, and every day gives me its harvest. When it is very hot, I cool myself in the shade of a tree; and when it is very cold, I warm myself by working. Old age is coming upon me, but my children are young, and will repay me for what I have done for them. If they always observe truth and moderation, a hundred years will not cost them a sigh. Whatever tempests may arise, tranquillity is a port always open to the innocent heart. Hail, tranquillity of the soul! Sweet charm of life, kings would sell their crowns to buy thee if they knew thy value. Complete thy benefits—thou hast helped me to live well—help me to die well.

THE CLOSING SCENE.

THE following is pronounced by the *Westminster Review* to be unquestionably the finest American poem ever written:—

Within the sober realm of leafless trees,
The russet year inhaled the dreamy air;
Like some tanned reaper, in his hour of ease,
When all the fields are lying brown and bare.

The gray barns looking from their hazy hills,
O'er the dun waters widening in the vales,
Sent down the air of greeting to the mills,
On the dull thunder of alternate flails.

All sights were mellowed and all sounds subdued,
The hills seemed farther and the stream sang low,
As in a dream the distant woodman hewed
His winter log with many a muffled blow.

The embattled forests, erewhile armed with gold,
Their banners bright with every martial hue,
Now stood like some sad, beaten host of old,
Withdrawn afar in Time's remotest blue.

On somber wings the vulture tried his flight;
The dove scarce heard his sighing mate's complaint;
And, like a star slow drowning in the light,
The village church-vane seemed to pale and faint.

The sentinel cock upon the hill-side crew—
Crew thrice—and all was stiller than before;
Silent, till some replying warden blew
His alien horn, and then was heard no more.

Where erst the jay, within the elm's tall crest,
Made garrulous trouble round her unfledged young;
And where the oriole hung her swaying nest,
By every light wind like a censer swung.

Where sang the noisy martins of the eves,
The busy swallows circling ever near—
Foreboding, as the rustic mind believes,
An early harvest and a plenteous year;

Where every bird that waked the vernal feast,
Shook the sweet slumber from its wing at morn,
To warn the reaper of the rosy east;
All now was sunless, empty, and forlorn.

Alone, from out the stubble, piped the quail;
And croaked the crow through all the dreary gloom;
Alone, the pheasant, drumming in the vale,
Made echo in the distance to the cottage loom.

There was no bud, no bloom upon the bowers;
The spiders moved their thin shrouds night by night,
The thistle-down, the only ghost of flowers,
Sailed slowly by—passed noiseless out of sight.

Amid all this—in this most dreary air,
And where the woodbine shed upon the porch
Its crimson leaves, as if the year stood there,
Firing the floor with its inverted torch;

Amid all this, the center of the scene,
The white-haired matron with monotonous tread,
Plied the swift wheel, and with her joyless mien
Sate like a fate, and watched the flying thread.

She had known sorrow. He had walked with her,
Oft supped, and broke with her the ashen crust,
And in the dead leaves still she heard the stir
Of his thick mantle trailing in the dust.

While yet her cheek was bright with summer bloom,
Her country summoned and she gave her all;
And twice war-bowed to her his sable plume—
Regave the sword to rust upon the wall.

Regave the sword, but not the hand that drew
And struck for liberty the dying blow;
Nor him who, to his sire and country true,
Fell 'mid the ranks of the invading foe.

Long, but not loud, the droning wheel went on,
Like the low murmur of a hive at noon;
Long, but not loud, the memory of the gone
Breathed through her lips a sad and tremulous tune.

At last the thread was snapped—her head was bowed;
Life dropped the distaff through her hands serene;
And loving neighbors smoothed her careful shroud,
While death and Winter closed the Autumn scene.

THOS. BUCHANAN READ.

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